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THE SURGICAL TREATMENT OF MITRAL INSUFFICIENCY *

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INTRODUCTION

Since the advent of cardiac surgery, the attention of the physician and surgeon has been focused upon mitral regurgitation. This lesion, formerly considered benign and compatible with normal life and functional freedom, has revealed itself as a considerable factor in the prognosis of patients with rheumatic heart disease.

Mitral regurgitation may exist as the only aftermath of rheumatic activity, or it may accompany, in varying physiologic degrees, the presence of mitral stenosis. In either case it adds to the cardiovascular burden and may be responsible for all or the majority of the manifestations of heart disease.

This lesion is peculiar in that it places a major physiological burden upon the left ventricle. Its secondary effects are upon the pulmonary vascular tree, and subsequently, the right ventricle. In brief, it has the same major effect as mitral stenosis with an additional effect upon the left ventricle.

Significant mitral regurgitation is incompatible with normal functional integrity whether it exists alone or in combination with mitral stenosis and, therefore, fully justifies the various surgical techniques applied to its correction.

A point which is becoming increasingly more evident is the frequent inaccuracy of the auscultatory recognition of mitral insufficiency, since we are able to compare the auscultatory findings preoperatively with the findings at surgery. A quantitative evaluation of regurgitation presents somewhat of a problem. We have attempted to do this by submerging the index finger in water and ejecting varying quantities of fluid through varying sized orifices toward the index finger and in such a fashion evaluate the amount of the regurgitant jet of blood with the index finger within the left atrium. We have attempted to evaluate the degree of regurgitation and after a considerable experience we have felt that a regurgitation of 10 cc. or less is of insignificant dynamic physiologic importance. When a greater amount of regurgitation exists, one must consider the surgical correction of this lesion.

In contrast to the condition of the left ventricle in mitral stenosis which remains relatively normal in size, the ventricle in mitral insufficiency becomes greatly dilated and hypertrophied by virtue of the compensatory effect to produce an adequate aortic output when a large portion of the contents of the left ventricle is re-

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gurgitated into the left atrium. This is obviously less prominent when a minor insufficiency exists.

PHYSIOLOGICAL CLASSIFICATION

Mitral insufficiency may be classified physiologically by simply dividing it into grades 1, 2, 3, and 4, depending upon the magnitude of the regurgitation per ventricular systole. Such quantitative evaluation is rather difficult by cardiac catheterization because of the frequency with which atrial fibrillation is present (atrial fibrillation was present in 71.3 per cent of our cases operated for mitral insufficiency) while digital "palpation" of the regurgitant jet of blood with the index finger is not entirely accurate, it seems to be the most reliable method we have for evaluation at the present time.

We feel that a grade 1 or 1 plus insufficiency is a small regurgitant jet which we have estimated to be no more than 5 cc. per heart beat.

A 2 plus regurgitation is somewhat larger and is a greater amount of blood than what we estimate to be no more than 10 cc. per heart beat.

A 3 plus regurgitation is estimated to be between 10 and 30 cc. per heart beat, and the 4 plus regurgitation to be all of those cases exceeding 30 cc. of regurgitation per ventricular systole.

PATHOLOGIC CLASSIFICATION

Mitral insufficiency may be classified, according to the type of lesion it presents, into congenital, traumatic, functional. (Table 1.)

TABLE 1
CLASSIFICATION OF MITRAL INSUFFICIENCY

Type of Valve	Number of Cases	Percentage
Functional Insufficiency	58	13.5
Organic or Mechanical Insufficiency	158	36.9
Traumatic Insufficiency		
Insufficiency created	158	36.9
Insufficiency increased	47	11.0
Congenital Insufficiency	7	1.7
TOTAL	428	100.0

Congenital Mitral Insufficiency. There are undoubtedly many different congenital anomalies of the mitral valve which might produce insufficiency; however, we have only encountered two types. There were 3 patients with one or more perforations of either one or both of the leaflets of the valve. There were 5 cases encountered which had an anomaly which was associated with an interatrial septal defect of the ostium primum type. A congenital cleft in the septal leaflet was proved subsequently in 2 of these patients.

Traumatic Insufficiency. While rare instances have been reported in which mitral insufficiency has resulted from a bullet wound [1] or a stab wound, however, the common type encountered is that which follows surgical treatment for mitral stenosis (Fig. 1). While the significance of

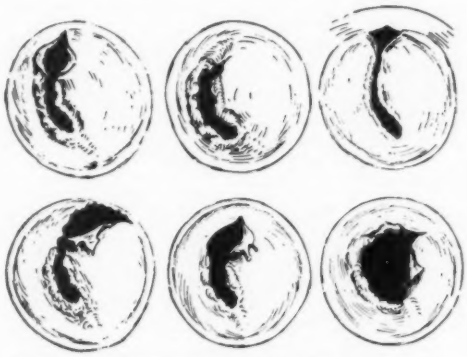


Figure 1. Traumatic insufficiency.

(a) Extension of commissural separation beyond normal anatomical limits of support causes limited insufficiency.

(b) Deviation of valvular separation slightly from normal commissural line.

(c) Extreme extension of commissural separation into heart wall may cause division of the atrioventricular annulus.

(d) Separation of one leaflet from its heart wall attachment.

(e) "Flail" valve due to separation of a leaflet from its supporting chordae at one extremity.

(f) Division of the continuity of a leaflet causes great insufficiency.

such regurgitation is usually not great, it is not infrequent. It was found to have occurred in varying degrees in 24.8 per cent of 635 consecutive patients operated upon for pure mitral stenosis, and the regurgitation was increased in 26.7 per cent of 176 cases operated upon for mitral stenosis which had associated insignificant

regurgitation preoperatively with a resultant increase in the insufficiency previously existing. These figures are somewhat misleading, however, and the importance of the creation of such a regurgitation is reflected directly in the operative mortality in that the operative mortality was 8.8 per cent in those cases where regurgitation was either created or increased, while it was 7.9 per cent among those patients who had no change in the competence of the mitral valve after mitral commissurotomy, the difference in the mortality being 0.8 per cent. There seemed to be no difference in the postoperative morbidity in these two groups.

Functional Insufficiency. A lack of the normal tone of the myocardium may result in a dilatation or overstretching of mitral annulus fibrosus. Such a dilatation of the annulus simply retracts the leaflets of the mitral valve and their edges do not come into apposition at the time of closure. It is frequently felt that this type of regurgitation is transient and reversible and not of appreciable significance. However, this may occur in an irreversible form in the presence of marked left ventricular enlargement resulting from aortic valvular disease and perhaps in some instances of essential hypertension. Apparently, a destruction of the annulus fibrosis may result from rheumatic disease and this is perhaps the more common persistent or permanent type of dilatation of the annulus. In many of such cases, the character of the mitral leaflets is almost within normal limits (Fig. 2).

It appears that when one annular dilatation has progressed to a certain point, a vicious cycle may result. Since the compensatory mechanism for mitral regurgitation is ventricular dilatation and hypertrophy, further stretching of the atrial ventricular ring will result. It follows that more valvular insufficiency will, in turn, require further compensatory ventricular dilatation and a progression of the lesion ensues.

Figure 2. Functional insufficiency due to annular overstretch. The leak is always posteriorly located.

(a) Normal valve orifice.

(b) Moderate functional insufficiency.

(c) Extreme functional insufficiency.

In most such cases, the anterior portion of the valve orifice remains competent, while the posterior commissure is the site where the major portion of the regurgitation occurs. It would seem that the best explanation for this phenomenon is due to the greater amount of valvular tissue in the anterior portion of the valve, and to the fact that the zone of contact in the anterior portion of the orifice has a larger amount of valve substance in apposition, and at the most posterior aspect of the commissure the valve edges normally are just barely in contact (Fig. 3 a, b, c, d).

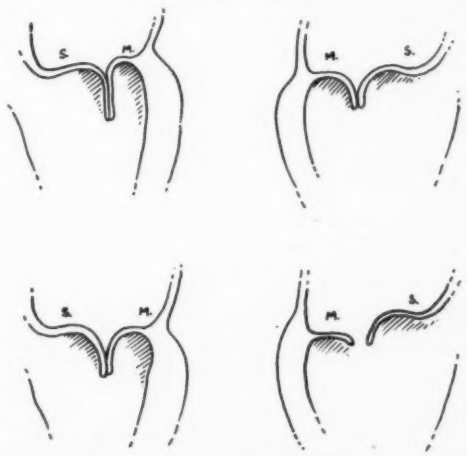


Figure 3. Anatomical explanation for posterior localization of incompetence in annular dilatation.

(a) Long section of normal valve in ventricular systole near anterior commissure.

(b) Same near posterior commissure.

(c) Edge approximation maintained anteriorly in annular dilatation due to presence of reserve valvular tissue.

(d) Failure of edge approximation in posterior portion of valve in annular dilatation.

If a symmetrical dilatation of the annulus occurs, of course, the portion of the valve which would first lose contact when it is

closed would be the posterior portion, and the more anterior portion of the commissure would still be in contact until extreme dilatation results.

This type of insufficiency occurred in 49 of our patients and there was no associated stenosis or distortion of the valve leaflets. Of course, there are many instances when there may be associated leaflet distortion, and this further complicates the lesion.

Mitral Insufficiency Due to Rheumatic Distortion of the Valve Leaflets, or Organic Insufficiency. With this type of lesion, the valve leaflets are thickened and distorted due to rheumatic disease and there is almost always an associated mitral stenosis. In many instances, we find severe degree of both mitral stenosis and insufficiency to coexist. Such a situation results in a "teardrop" shaped orifice with the "bulbous" portion of the teardrop representing the posterior commissure (Fig. 4 a and b).

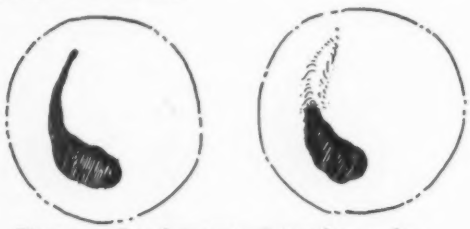


Figure 4. Development of teardrop valve.
(a) Functionally insufficient valve.
(b) Superimposition of stenosis upon the anterior (competent) portion of the valve.

Another form of insufficiency which should be considered in this classification is that in which there is marked irregularity of the valve edges due to thickening, and quite frequently calcification. This is usually found in association with a very hard valve either due to the very severe fibrosis or extensive calcification of the leaflets resulting in an arcuate type of valve.

Rheumatic disease very frequently will involve the chordae tendineae and papillary muscles and by the process of either fusion, distortion, or shortening, will result in retraction of the valve edge downward or into an abnormal position, usually lateral, and the valve edges cannot come into apposition during ventricular systole. Dodrill,[2] and Kay [3] have suggested digitally freeing up the adherent or fused chordae tendineae by a transvalvular approach. The authors and associates [4] have attempted to advance the displaced leaflet toward the atrium by using a transventricular pericardial strip to provide a suture to draw the free edge of the leaflet downward toward the ventricular apex. Recently, one of the authors (W. L. J.) has modified the teshnique whereby a transventricular probe is passed through one edge of the mitral leaflet to suspend it when there is differential shortening of the chordae and when a portion of the mitral leaflet must be suspended (Fig. 5).

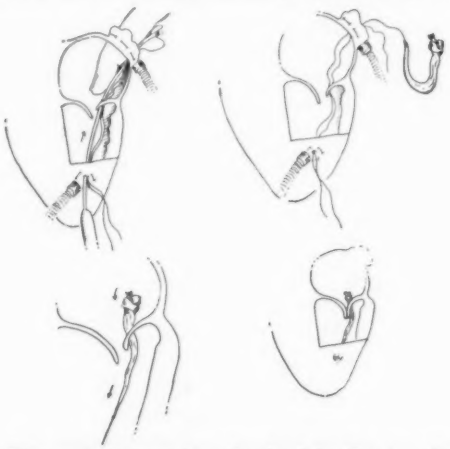


Figure 5. Suspension of mitral leaflet in mitral insufficiency due to unequal shortening of chordae.
(a) By transventricular passage, threaded probe pierces the higher leaflet and follows the finger to emerge from left auricular appendage.
(b) Suture is grasped, probe is withdrawn, and the atrial end of the suture is attached to the tapering end of a knotted pericardial graft.
(c) Pericardial strip drawn into heart.
(d) End of new support secured to epicardium.

Traction upon this strip of pericardium which is attached to the edge of the valve leaflet will result in what might be considered an "artificial" chorda tendinea.

CORRECTION OF ACTUAL OR RELATIVE LACK OF VALVE SUBSTANCE

Results with three different surgical procedures to correct mitral insufficiency are shown in Table 2.

TABLE 2
OPERATIVE MORTALITY FOR THE THREE TECHINQUES FOR CORRECTION OF MITRAL INSUFFICIENCY

Type of Operation	Number of Cases Operated	Mortality
Transventricular Sling "Hammock"	52	38 %
Transventricular Suture of Valve Leaflet	72	27.8%
Transventricular Suture with "Stitcher"	19	21 %

A transventricular segment of an inverted vein hung loosely beneath the incompetent mitral valve was first described by Murray,[5] the effect of which was to have the graft swing into the mitral valvular orifice during ventricular systole in order to occlude the incompetent valve orifice. This technique was subsequently modified by Bailey[6] by using a pedicled graft of pericardium across and below the incompetent mitral orifice and, in a similar fashion as the Murray type of graft, this pericardial tube functioned to swing into the incompetent valve orifice, and during ventricular diastole the graft would fall away from the mitral orifice to allow filling of the ventricle. Our experience with this "hammock" below the mitral valve was disappointing, the mortality rate being 38 per cent in 52 cases. (Table 2) The reason for the failure of this procedure was due to the trauma during the operative procedure resulting in instances of ventricular fibrillation and cardiac arrest. On some occasions, the graft became swollen and the increased bulk reduced the ventricular capacity seriously. Some patients developed an unexplained tendency toward bleeding and in some unexplained fashion the normal bleeding and coagulation mechanism was disturbed.

The ultimate outcome of these grafts resulted in the shrinking and, of course, shortening of the graft, and finally the procedure was abandoned.

In view of our previous experience with the ultimate fate of transventricular pericardial hammocks, it was presumed that eventually shrinkage and fibrosis of the graft and the late extension of the fibrosing process into the adjacent valve leaflets would result in sealing of the posterior peripheral segment of the valve orifice by fusion of the adjacent valve leaflets as well as the tissue suture.

It has been found that pericardial grafts become degenerated into shrunken fibrotic chords when a "sheet" pericardial graft is used in the experimental animals.[7]

We have had occasion to examine at a second operation a transventricular graft of pericardium in a patient who subsequently developed mitral valvular obstruction because the graft had become sealed to the valve orifice, restraining regurgitation but also producing mitral stenosis. It was possible to perform an instrumental "commissurotomy," cutting the graft away from the septal leaflet thus restoring good valve function as well as relieving the stenosis and without restoring the incompetence. The graft remained attached to the mural leaflet adding a considerable amount of new living tissue to its retracted free edge. From this experience came the concept of deliberately performing selective plastic grafting to the edge of the mural leaflet.

In addition, four patients have come to autopsy four months to two and one-half years after the placement of pericardial sutures within the heart. In all instances, the graft was completely replaced by fibrous connective tissue. The thicker grafts have shown shrinkage and contraction. A thinner graft had become elongated and stretched out.

In summary, we may say that pericardial sutures or grafts placed within the free cardiac chambers do not die or dissolve; they become completely replaced by fibrous connective tissue and tend to shrink both in length and in diameter. The latter tends to become about one-half of the original size, although it must be remembered that initially (twelve hours to ten days) these grafts may swell to two to four times their normal diameter and, hence, may encroach seriously upon

the capacity of the chamber in which they are placed.

The application of these observations in further use of such grafts is obvious. They cannot be depended upon for prolonged flexible movement. They can be used as suture material or as grafts to add fibrous tissue to the structure to which they are applied. While they shrink significantly, the larger grafts remain of appreciable size, at least for a period of two years and presumably indefinitely.

CREATED MITRAL STENOSIS

Another very pertinent point is concerned with the possible surgical production of an incapacitating degree of mitral stenosis. While the likelihood of such an occurrence would seem to be extremely remote in patients with widely open valve orifices, incompetent chiefly or entirely because of annular dilatation, it did develop in several patients with valve openings which were of borderline size even after the performance of an anterior commissurotomy.

This experience led to a modification of the concept of actual suturing together the posterior portions of the leaflets in all cases where there was even the slightest doubt as to the adequacy of the eventual size of the opening. Instead, a heavy suture of pericardium was placed between the posterior commissure and the margin of the mural leaflet usually at about its midportion. This amounted to an attempt to obliterate the exaggerated concavity due to fibrosis and retraction in this portion of the margin of this leaflet by adding new grafted tissue to its free edge. This permitted unhampered movement of the septal leaflet while the valve opening during diastole remained nearly as large as before. In effect, the result aimed at was similar to that momentarily accomplished by placing the finger tip within the posterior incompetent portion of the valve orifice (Fig. 6). Unfortunately, the transventricular approach significantly limited the size of the suture which could be used conveniently. Hence, the regurgitation was merely reduced in many

Figure 6. Complete momentary correction of mitral insufficiency by blocking posterior incompetent portion of valve. Large orifice prevents significant obstruction.

of these cases and not completely abolished. The clinical result obtained in these individuals was about proportional to the technical achievement in reducing the noted regurgitant jet.

Recently, one of the authors (W. L. J.) introduced an instrument for intracardiac suturing which has been modified by other members of our Clinic. This mitral stitcher is now a satisfactory device for suturing within the heart by a transauricular approach (Fig. 7 and Fig. 8). Since this method of valvular repair has become possible, very striking improvements in the operative course and mortality, and in the achieved clinical results have become apparent in these cases. Since the addition of a third "tail" to a central pericardial mass, a more accurate application of the graft to obliterate the concavity of the mural leaflet has become feasible.

PRESENT SURGICAL TECHNIQUE

The patient is studied and prepared in the same manner as in other cases for mitral surgery. Since 71.3 per cent of these patients have chronic atrial fibrillation, nearly all will be on full digitalization prior to surgery. After full compensation has been established and improvement has reached a maximum, the patient is brought to the operating room and is

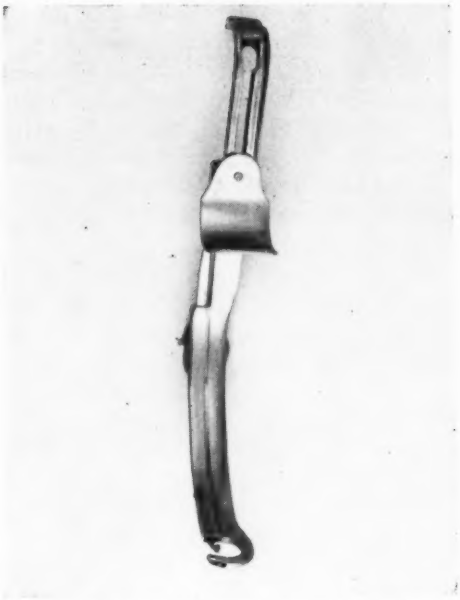


Figure 7. Modified mitral suturing instrument (open).

Figure 8. Modified mitral suturing instrument (closed).

anesthetized in the usual manner. This is the combination program of the intravenous pentothal and procaine and endotracheal oxygen, which has been described by Keown and associates.[8]

The patient is placed in the true lateral position with the left side up. The usual curved posterolateral incision is made beginning in the midclavicular line below the breast, and extending up posteriorly to the level of the spine of the scapula.

The fourth intercostal space is opened from the internal mammary vessels to the transverse processes of the vertebrae. The lung is compressed posteriorly. If there are pleural adhesions, the upper lobe is mobilized completely, but the lower is left adherent.

The pericardial sac is incised posteriorly and parallel to the left phrenic nerve from apex to base. The surface of the usually dilated left atrium is palpated to detect the pathognomonic systolic thrill of mitral insufficiency. Occasionally, however, it is absent even when a significant degree of regurgitation exists.

The distal portion of the usually greatly dilated left auricular appendage is encircled with a purse-string suture. This is incorporated within a Rumel-Blemont tourniquet. The appendage is clamped off and the terminal end is incised for a distance of 2 cms. Its cavity is flushed with saline. The tip of the index finger of the glove is removed and the operator's bare finger tip is inserted between the lips of the opening. As the occluding clamp is removed, the finger is passed well into the left atrium, hemostasis being provided by tension on the purse string.

The valve is immediately sought, and its structure is explored. The existence and relative amount of the insufficiency are estimated from the size and character of the regurgitant jet. The size of the valve orifice, the presence and type of any coexistent mitral stenosis, the localization of the jet with relation to the valve commissures, and the flexibility of the leaflets must be carefully estimated. The presence of any calcification and its amount and character are determined.

After a thorough exploration of the valve, the operator will have an idea of the type and extent of the insufficiency, the necessity and probable success of cor-

rective surgical measures, and the advisability or necessity of an attempt at preliminary commissurotomy. If the latter is required, it is performed at once in order to enlarge the valve opening and to improve its functioning. Sometimes, a properly performed commissurotomy alone is all that is necessary to restore a considerable degree of valve competence. In these individuals, no further corrective surgery is indicated.

However, in most instances the insufficiency will persist after the performance of the commissurotomy. Then, the operator may gently insert his finger tip into the incompetent portion of the opening to determine whether there is a relative or actual lack of valvular tissue posteriorly or elsewhere. In many cases, the cross sectional area of the finger tip will add sufficiently to the "substance" of the valve to restore competence without seriously blocking the size of the aperture during diastole. This phenomenon is dependent upon the existence of a functioning septal leaflet.

In certain cases, one leaflet (usually the mural) will be determined to be suspended at a higher level than the other. This unequal tendinous suspension of the two leaflets indicates the advisability of placement of an "artificial" papillary suspension as previously described (Fig. 5.) Depression of the higher leaflet with the finger tip will usually restore full compensation (Fig. 9).

In most cases, the leak will be found to be located posteriorly and one of the forms of direct suture repair of the incompetent posterior commissural region (commissurorrhaphy) will be deemed advisable if it is over two plus in magnitude. Having estimated, with the finger, the amount of the lack of valvular substance, the finger is removed from the heart and the appendage is clamped.

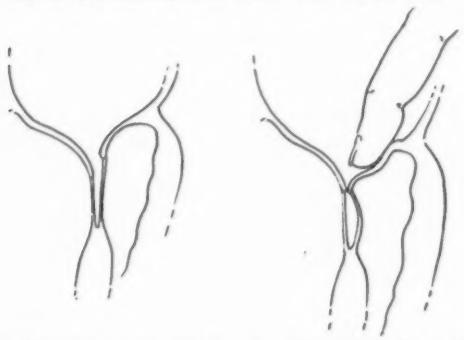


Figure 9. Depression of a higher leaflet with the index finger, bringing the edges of the valve into apposition.

A full length broad strip of the pericardial sac is removed from the region anterior to the left phrenic nerve. Great care is taken to control any bleeding from the remaining cut edges or from the dissected mediastinal tissues.

When the valve is unusually flexible, when the orifice is large, and when there appears to be an adequate quantity of valvular tissue for suture approximation without tension, a 3 cm. wide strip of pericardium is obtained to be used as a simple approximating suture between the valve edges making up the posterior peripheral segment of the orifice. Both ends are cut in tapering fashion and an "eye" is created in one end (Fig. 10).

When it is felt that, because of an actual or relative lack of valvular substance, there is a necessity for the application of additional living substance to the posterior incompetent portion of the valve, provision is made for it in either of the following two ways. If the pericardial strip is deemed to be sufficiently long, it is trimmed so that it is 3 cms. wide throughout its length except in the very middle portion, where all excessive pericardial tissue is maintained attached. This is rolled or folded about the central axis of the strip in such a way as to create a mass of pericardial tissue 2 to 3 cms. long, and perhaps as thick as a man's finger. This is to be placed on the ventricular aspect of the valve in its incompetent portion. Since it will swell initially and shrink eventually, considerable care should be devoted to creating the correct size of the mass or "plug". The shape is definitely established by the application of securing sutures of fine arterial silk. Both extremities of the pericardial strip are bevelled.

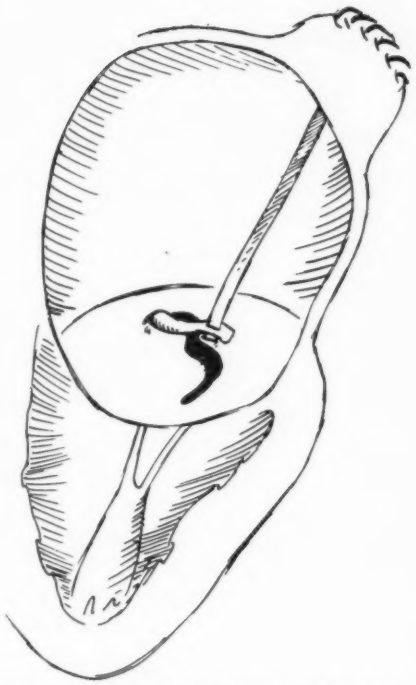


Figure 10 A "noose", using a strip of pericardium for suture, in position at the posteromedial commissure, the free end sutured to the atrial appendage.

On the other hand, if the length of the available pericardial ribbon seems short in comparison with the size of the left atrium, it may be simply trimmed to a 3 cm. width with tapering extremities and an "eye" in one end. Then, an additional strip may be "impaled" upon the tapered one by passing the latter through each of a longitudinal row of openings made in the former one. This produced an "accordian-pleated" mass which can slide freely upon the tapering strip.

Now, having prepared a suitable "pericardial suture", the bare right index finger is returned to the left atrial chamber. The left-sided "mitral stitcher" is threaded with a heavy nylon suture (#2) and is inserted into the heart by passage along the index finger and under the anterior lip of the incised auricular appendage. The open instrument is applied to the free margin of the valve orifice in such a way that the suture-bearing "beak" is engaged beneath the mural leaflet. When simple suture obliteration of the posterior incompetent segment of the valve is all that is intended, the beak is placed at a point two-thirds of the distance from the anterior commissure to the posterior (junction of the posterior and middle thirds). When it is intended to apply additional substance to the valve, the site of mural leaflet penetration is selected as that point where the leaflet retraction begins to become apparent. This will usually be about at the midpoint in the length of this leaflet.

Having placed the beak properly under the leaflet, the ends of the nylon suture are held under slight tension and the spear-like sliding blade is advanced by pressure of the thumb of the operator's left hand. It pierces the valve substance creating a 3 mm. long slit and engages the nylon suture held in the beak within the slotted groove on its outer edge.

By backward traction upon the sliding blade, a loop of nylon suture is drawn up into its sheath and finally well out of the heart (at least 8 to 10 cm. out of the instrument). The sliding blade is detached from the suture loop, and the instrument is disengaged from the valve and removed from the heart. One loop of nylon suture and two free ends now emerge from the opening in the left auricular appendage. The former emerges from the atrial aspect of the mural leaflet of the valve while the latter traverse the valve orifice to penetrate the ventricular aspect of the mural leaflet. Each of these three suture ends is fixed *without tension* to the drapes by fine hemostats.

Now, if the posterior peripheral valve segment is merely to be sutured closed, the threaded right-sided "stitcher" is inserted into the heart and a similar nylon suture is placed at the selected point (somewhat more posteriorly than at the junction of the posterior and middle thirds) in the substance of the septal leaflet. The loop and ends are brought out of the appendage in similar fashion. Such cases will be those with very large valve orifices, and

some of them may also require the placement of a second more posteriorly located approximating suture.

When the over-all valve size is less adequate and when one only desires to add extra living tissue to the retracted mural leaflet, the left-sided stitcher is rethreaded and re-applied. This time it is inserted into the left atrium along the intracardiac finger which is held in a pronated position, taking care not to entangle with the previously placed nylon sutures. The "beak" is engaged under the posterior commissural tissue in such a way as to be assured that the graft tissue mass will be well applied to the contracted concave free margin of the mural leaflet. The sliding blade is driven forward penetrating the commissural tissue and engaging the suture loop which is then drawn out of the heart. The remainder of the instrument is disengaged from the valve and withdrawn. Again, the loop and two ends of nylon emerge from the appendage and are tacked down without tension to the available wound drapes to avoid entanglement and subsequent confusion. (Fig. 11a, b, c, d, e, f)

Now, the tapering extremities of the pericardial strip are attached to two nylon ends which pierce opposite valve leaflets (or the mural leaflet and the commissural tissue).

Traction is now cautiously made upon the appropriate sides of the two nylon loops until the free ends attached to the pericardial strip become drawn into the heart.

The traction must never be forceful and undue tension must never be permitted lest the valve leaflets become "sawed through." Judicious release of the purse-string tension and appropriate manipulations of the intracardiac finger aid greatly in the application of the graft.

If the heart action becomes weak at any time, it is probably related to temporary aggravation of the insufficiency by distortion of the valve by the traction. It can be alleviated by release of the traction and by placement of the finger tip into the incompetent portion of the valve ori-

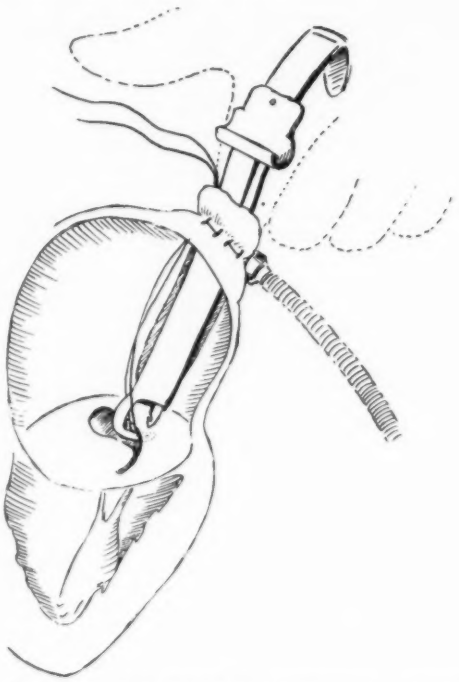


Figure 11. (a) Suturing instrument engaged upon mural leaflet at anterior extent of the leak.

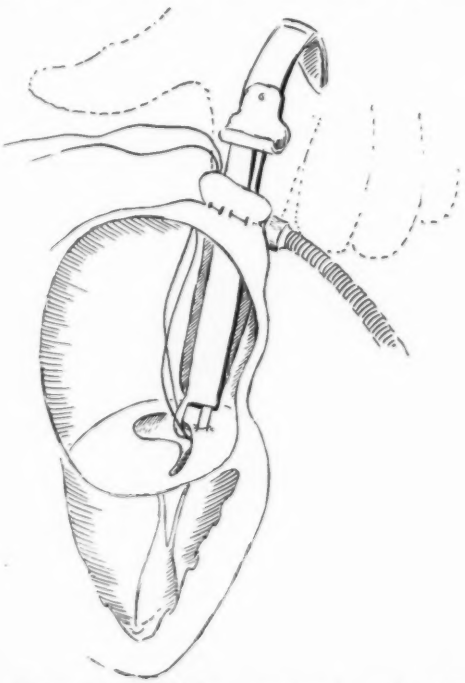


Figure 11. (b) Valve punctured and suture picked up by sliding blade.

fice to improve its function until full vigor is restored.

Finally, the pericardial ends will reach the puncture sites in the valve from the ventricular aspect. They may meet with considerable resistance to further passage because of the smallness of the perforations. However, if the entire graft is inserted into the left atrial chamber, to reduce external friction drag, and if the nylon suture is pulled successively in different directions (cephalad, caudad, anterior, and posterior) with a release of tension between each change of direction, the tapered nylon ends will soon emerge from the heart and the graft will be in place (Fig. 12 a, b, c, d).

If the type and size of the graft have been properly selected and placement has been accurate, the regurgitation should be nearly completely abolished at once, especially if gentle traction is made upon the nylon ends. This may be made permanent by passing the intact tapered end of the suture through the previously made "eye" of the other extremity in the case

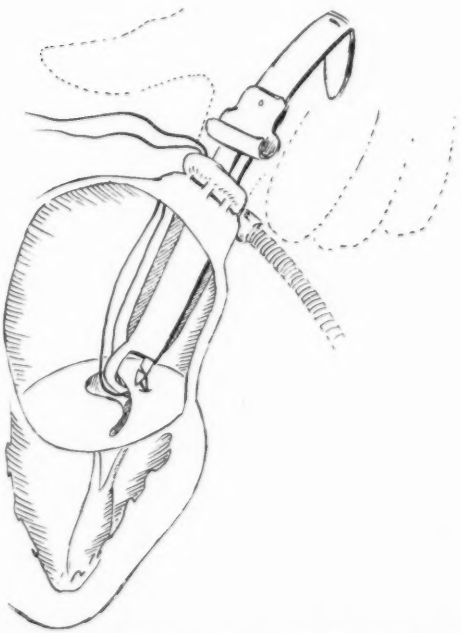
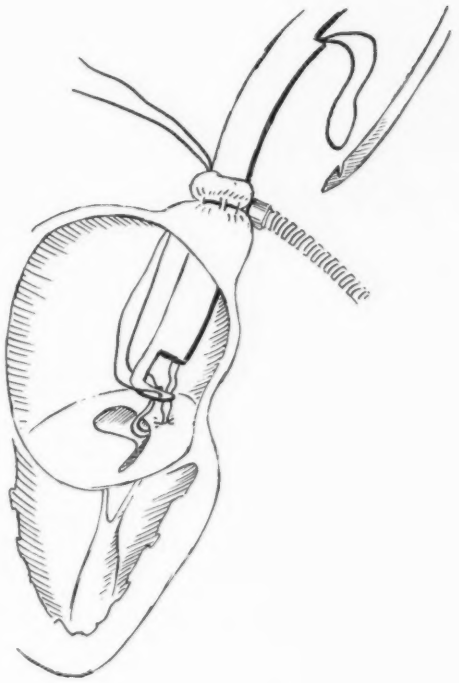


Figure 11. (c) Sliding blade retracted bringing loop up through the valve leaflet.



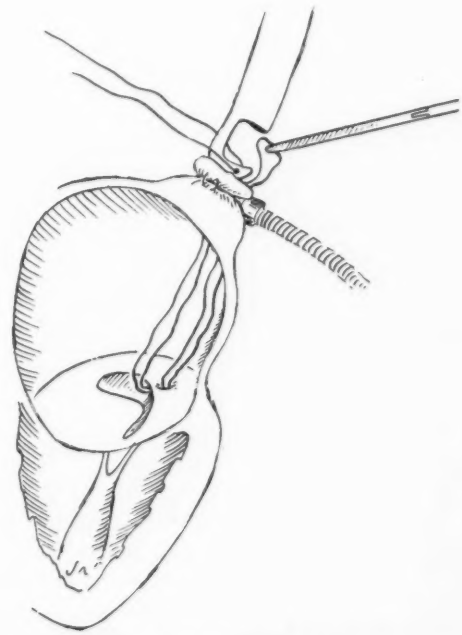


Figure 11. (d and e) Both blades removed from heart.

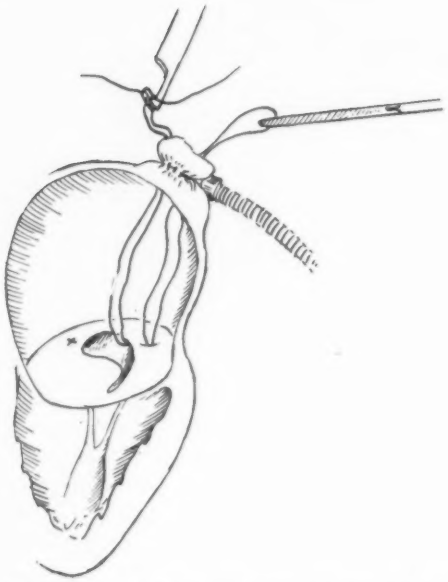


Figure 11. (f) Free ends of suture material protruding from atrial appendage. Site of placement of the suture into the anterior leaflet is indicated.

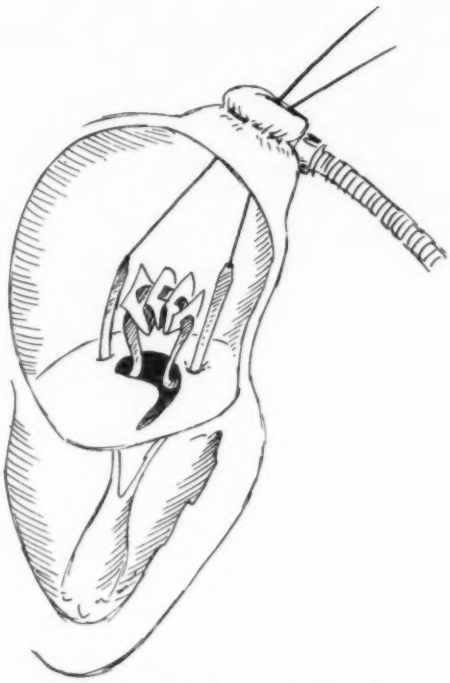


Figure 12. (b) Traction upon the suture pulls the pericardial strip and impaled mass into the atrium.

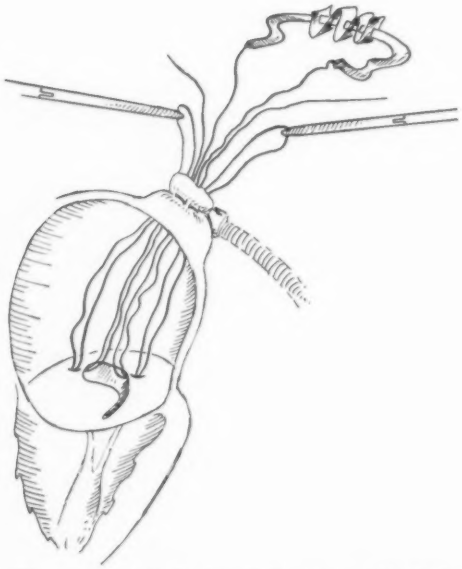


Figure 12. (a) Pericardial suture attached to free end of the protruding suture and "impaled" mass of pericardium in position at the central portion of the pericardial suture.

of the simple approximating suture or the suture with an impaled mass. The fine suture loop which had been placed in the substance of this "impaled" mass to prevent its possible loss into the blood stream in the event that a nylon suture should have become separated from a pericardial end, is now cut and removed. In the case of the central rolled pericardial mass, no noose technique is possible and both pericardial ends must continue to emerge from the appendage. With the latter type of graft, a third pericardial suture may have been added and brought out through the substance of the mural leaflet midway between the other two perforations. This secures a more accurate and effective application to the edge of the mural leaflet (Fig. 13 a, b).

The mitral insufficiency having been largely or completely corrected, as indicated by the lessening or abolition of the regurgitant jet, and an adequate residual valve orifice having been obtained, the

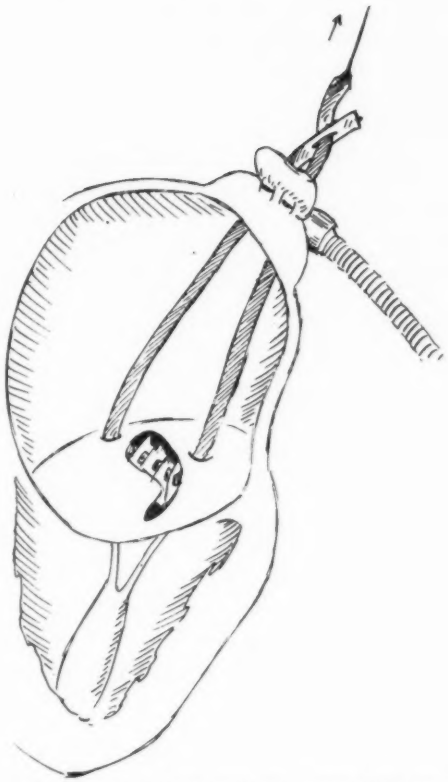


Figure 12. (c) One end of pericardial suture passed through an "eyelet".

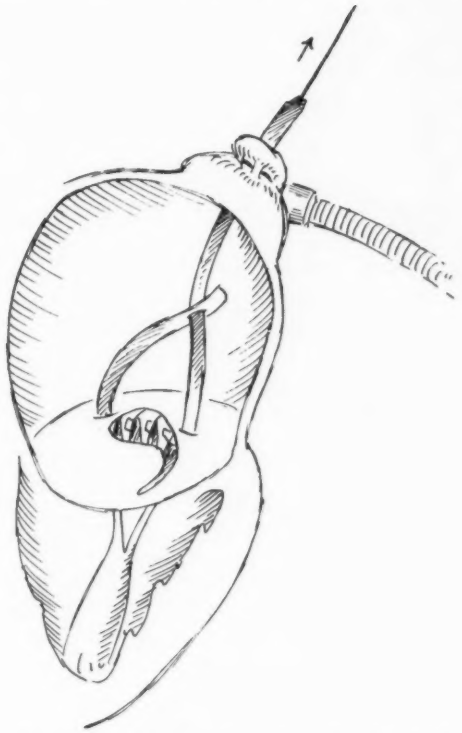


Figure 12. (d) Traction upon the free end of the pericardium tightens the loop.

procedure is terminated. The finger is withdrawn from the heart and the appendageal stump is ligated and oversewn. The oversewing sutures are carefully guided through the substance of the emerging pericardial end or ends. No great tension is applied to them.

Chest wall closure is routine, using simple waterseal drainage through a fenestrated #26 urethral catheter inserted through a stab wound in the left eighth intercostal space, posterior axillary line.

CONCLUSIONS

Significant mitral insufficiency either alone or in combination with other valvular lesions invokes a definite burden on the heart and as such justifies surgical attempts to correct the defect.

Earlier techniques utilizing a transventricular sling or hammock in order to occlude the incompetent valve orifice were attended by a high mortality (38 per cent). Later procedures such as the transventricular suture of the mitral valve leaflet, and the presently used intracardiac suturing by way of a transauricular approach have decreased the mortality to 21 per cent. Additional modifications will undoubtedly further improve the results and will make them comparable to those achieved with other forms of mitral valve surgery.

SUMMARY

1. Mitral insufficiency in well developed form is one of the two most devastating acquired valve lesions.

2. A functional and a pathological classification of this condition has been given.

3. An anatomical and pathological explanation of the two most common types of serious insufficiency is given. Its char-

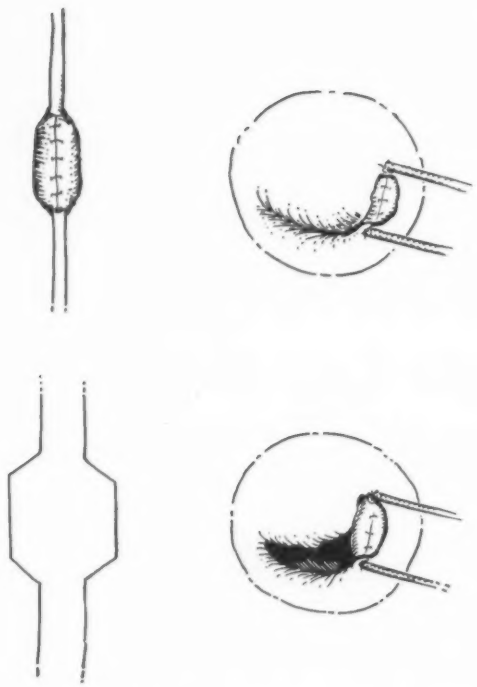


Figure 13. (a) The pericardial strip is cut so that a central rolled pericardial mass may be used to traverse a defect at the posterior commissure. Diagram shows the incompetent posterior commissure occluded with the valve closed and open.

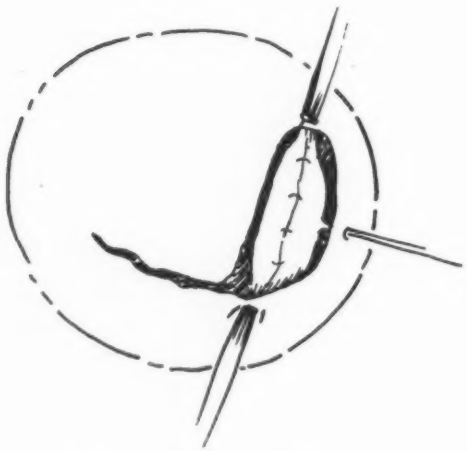


Figure 13. (b) A third suture may be necessary to hold the pericardial mass into its proper position in the posterior commissural defect.

acteristic posterior localization is pointed out and explained.

4. The various types of commissurorrhaphy and their basic underlying principles are detailed.

5. The disadvantages and dangers of the transventricular methods of valvular suturing are clarified.

6. The use of the "mitral stitcher" for valvular suturing by the transatrial approach is indicated and the technique is described.

REFERENCES

1. Adam, A.: Uber die traumatischen Veranderungen gesunder Klappen des Herzens, Ztschr. f. Kreisslaufforsch, 19:313, 1927.

2. Dodrill, F. D.: Experience with the mechanical heart, J.A.M.A., 154:299, 1954.

3. Kay, E.: Personal communication.

4. Bailey, C. P., Bolton, H. E., and Redondo-Ramirez, H. P.: Surgery of the mitral valve, S. Clin. N. America 32: 1807, 1952.

5. Murray, D. W., Wilkinson, F. R., and McKenzie, R.: Reconstruction of the valves of the heart: Canad. M.A.J., 38:317, 1938.

6. Bailey, C. P., O'Neill, T. J. E., Glover, R. P., Jamison, W. L., and Redondo-Ramirez, H. P.: Surgical repair of mitral insufficiency, Dis. Chest 19:125, 1951.

7. Henderson, A. R., and Law, C. L.: Surgical treatment of mitral insufficiency, Surg. 33:858, 1953.

8. Keown, K. K., Grove, D. D., and Ruth, H. S.: Anesthesia for commissurotomy for mitral stenosis, J.A.M.A. 146:446, 1951.

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ALLERGY IN GENERAL PRACTICE *

J. P. SANDERS, M. D.
SHREVEPORT

In the author's opinion, the practice of allergy as a specialty is probably the least exact of all the specialty groupings. There are more variable factors, less exact knowledge generally known, and far too many conditions that can never be properly evaluated. While the study of allergy is advancing rapidly, capable men all over the world are making constant comparisons, constant surveys, and doing constant research. But still so many variables occur that allergy for the general practitioner, as well as for the specialist, seems many times to be an inexact science. If the author seems uncertain in many of the statements made in this paper, it is

* Presented at the Seventy-fourth Annual Meeting of the Louisiana State Medical Society, May 22, 1954, in New Orleans.

because that uncertainty actually exists in the practice of allergy, or seems to exist, in the mind of the author himself.

The general practitioner is the first line of defense in treating allergic conditions. Since allergy is on the increase, or at least seems to be, in the past few years, it behooves the family physician more than ever to be up to date in his recognition of the disease in its care and treatment.

In a great many cases, the family physician brings the baby into the world, takes care of it through its infancy and childhood, and carries it on into adult life. Frequently, he is consulted by the mother for the baby's colic, the diaper rash, and other allergic manifestations which may become apparent in the infant. As these manifestations change, the patient develops into an asthmatic or hayfever patient. It is the family doctor usually who has to take care of this allergy. The over-all care includes the diet, frequently a balanced allergic room, and other factors that influence the youngster's life.

Finally, if the manifestations become too severe, the attacks too frequent, and the over-all care too demanding for the general practitioner, it is he who picks out the specialist to make an allergic survey and plan the continued treatment. If the patient has to take extracts or other shots, the family doctor is usually the one who has to give them. In any case, he assists the specialist in looking after the over-all care and general treatment of the allergic individual.

A well trained general practitioner must have a good working knowledge of allergy. Diagnosis is all-important. Patients who come in with an allergic background should have thorough histories. Since approximately 80 per cent of the population have a minor allergy and 10 per cent a major allergy, it is very important to get this information in the patient's history. Even though his allergy may vary from that of his father or mother, it is always important to know what their allergies are, whether or not they are severe, how frequently they occur, and what treatment seems to relieve them. In taking a history, it is important to find out when the patient's allergy appeared, estimate its severity, frequency of recurrence, and the type of manifestation the present allergy takes. For example, it is very important to know whether the patient is an asthmatic or has hayfever; whether he is in anaphylactic shock; or whether he has angioneurotic edema or nettle rash. Contact dermatitis, eczema and other manifestations should be clearly defined in the general practitioner's mind. We must, by all means, be able to differentiate between an allergy and other diseases of a similar nature. Frequently, this is not easy. It can be done only after a thorough history is taken, a complete physical examination of the patient has been accomplished, and other pertinent information obtained. Here again, the family history and the patient's background are important. For example, an asthmatic may be either bronchial or cardiac. If he gives a history of the attack coming on after exertion, we suspect the heart. Whereas, if the attacks have occurred since adolescence, we suspect the bronchi.

Ordinarily, the over-all care of the patient is the job of the family doctor. He has to see that the patient lives in a non-allergic atmosphere. The home should be free of dust or other allergens to which the patient might be sensitive. If the patient has symptoms while he is at his office or his place of business, then it is usually the general practitioner who has to survey that place of work and determine what factors are causing the patient's symptoms. He actually may have to decide what sort of a vacation the patient may take, where he must travel, what foods to avoid, what pollens to stay away from, and other things that may affect the over-all allergic care. It is inadvisable to send a patient away from his home environment thinking that his allergic condition will improve in other surroundings. In many cases, the reverse is true. His allergic condition may actually become worse. All of us have seen

this happen in many cases after the patient has gone to a considerable amount of trouble and expense in moving to what he called a "higher and drier climate." One of my patients found that he was completely relieved when he visited Galveston, only to have the symptoms return when he came back home.

Unless the general practitioner has had special training, it is probably unwise for him to prescribe extracts or other materials for desensitizing the patient to any allergen. These extracts may be dangerous, frequently have to be given in very small quantities for a period of time, and gradually increased as the patient becomes desensitized. The general practitioner will frequently be called upon to administer the extracts after the allergist has prescribed them.

A considerable amount of work has been done recently in using antihistamines along with desensitizing extracts to prevent untoward effects and make it possible for the patient to receive much larger doses of the allergen and thereby hasten the desensitizing process. For instance, the manufacturers of Chlortrimeton strongly recommend the addition of small amounts of this drug in the same syringe with the allergens. They have definitely demonstrated that larger quantities of the allergen can be given by this method than otherwise. Histadyl (thenylpyramine),* has been found to lower the percentage of transfusion reactions when used prophylactically before the blood is administered.

In the author's opinion, the educational training the patient receives is probably the most important of the whole allergic regime. Cooperation of the patient is obviously important. Unless he believes in it, will attempt to carry out the doctor's orders, and otherwise submit to the changed regime, the improvement or cure is very problematic. I think that the patient has to be told that the disease is chronic, that any treatment will have to be carried out over a long period of time, and that it is expensive in time, money, and effort, but the end results are worthwhile. Psychosomatic medicine certainly becomes important when the physician sells his patient the idea to continue. In my experience, the uncooperative patients have been those who have gotten the least help. They have either found that the treatment was too long-drawn-out, that it cost too much, or that it was just simply too much trouble to try to continue. Therefore, they would relapse, possibly get worse, and many of them drift on to some other physician. If the "quacks" had anything to offer these poor individuals, they would certainly be over-run with patients.

One of the reasons for the difficulty in handling an allergic patient is that he may have two or more manifestations of the same disease. Again, he is frequently sensitive to many allergens, a few of which are causing his trouble, the others being unimportant. All of these tend to confuse the physician and make it all the more difficult to put the patient on a regime that will keep him symptom-free. For example, I recall a patient a few years ago who came to me (or went elsewhere) for a complete testing every two years. At the end of the testing, he paid his bill promptly, thanked us for the efforts, and went his way. We neither saw nor heard from him for another two years. During all this time, he was symptom-free, and his argument was that the testing alone had cured his symptoms, and that two years relief was entirely satisfactory for the amount of money he paid out. At the end of that time, another set of tests would again completely free him of all his symptoms. This regime had gone on for about fourteen years, with a set of scratch tests each two years during that period of time.

Frequently, in the care of the patient, we have two problems. First, the emergency relief of the symptoms presently manifested; second, corrective measures for the prevention of the disease. Many times we will use measures for emergency care that are of little value in the prevention of symptoms. For example, adrenalin

* Put up by Eli Lilly & Company.

may relieve a severe asthmatic attack, but be worthless in preventing another attack.

TESTING

Testing is important to both the general practitioner and the specialist. It is inconceivable that we can ever find out what a person is allergic to unless some sort of test is tried. There are all sorts of methods of testing. These include: the intra-occular, the scratch, the intradermal, the patch, the inhalation, the ingestion, and the passive transfers. Each has its advantages and its disadvantages. For example, the intra-occular tests for one or two allergens are fine. It is easy to put a drop of the allergen in the corner of the eye and to watch for five or ten minutes for any positive reaction. Redness of the conjunctiva, enlargement of the blood vessels, and edema, each indicates a positive reaction, and the severity is clearly demonstrated. But it is impracticable to do many intra-occular tests.

Scratch Test—This is easy to do and has the advantage that most any portion of the body may be utilized. The scratch should not be over one-fourth inch long, should not penetrate the dermis, and should not bring forth blood. The allergen must be deposited in the scratch. There is always the danger of infection. There is some danger of administering an overdose of the allergen to the patient.

Intra-dermal Test is similar to the scratch test, and has practically all the advantages and disadvantages of the scratch test; .02 cc. of a specially prepared allergen is usually sufficient for one test and should be injected just underneath the epidermis, and compared with a control. Larger amounts of the testing allergen should not be administered lest a false positive be produced. Lesser amounts might give false negatives.

Patch Test is one of the most common carried out. It can be done with a small amount of material placed on a piece of sterile gauze, moistened sufficiently to adhere to the skin and the patch attached to the skin for a period of twenty-four to forty-eight hours. It has the advantage of being amenable to most any surface and can be repeated without danger or difficulty to the patient.

These three—the scratch, the intradermal, and the patch tests must be applied to the skin where no allergy is present.

In all cases of allergic sufferers, we run the risk of throwing the patient into an attack and should have adrenalin ready at all times in case of the emergency.

Testing by *inhalation* is limited, of course, to volatile materials. The patient has to depend upon his own sensitivity to determine the reactions.

Swallowing is another method of testing. It is frequently unreliable due to the fact that foods are usually consumed in combinations. The patient rarely takes one food alone. The reaction depends so much upon the amount of the food taken, the length of time after the ingestion of the material, and other factors such as temperature, humidity and environment.

All in all, no one doing allergy can get along without some sort of testing. Usually it should be done by the specialist and the results transmitted to the general practitioner. In either case, a large variety of testing material will have to be available. Most allergists have come to the conclusion that a few tests are insufficient, are misleading, and give the physician and the patient a false sense of security with regard to his re-activity. Some physicians still make up their own allergens and extracts, while others acquire these from one of the reputable allergen manufacturers. Constant vigilance to see that the allergens are of proper strength, are not out of date, are not contaminated, and are otherwise acceptable for use, is necessary in order to do good work.

Block testing, which is frowned upon by some, has one definite advantage. It eliminates some of the pain for the patient. If one block of seven substances is negative, then it is not necessary to test that patient for those seven substances. Each physician doing allergy has to determine for himself what test he will want to use.

Passive transfers is another method for testing. It consists of withdrawing blood from a small child (or a larger patient, unable to be tested) and injecting the serum into a non-allergic individual. The testing is carried out around the site of the serum injection, at a one- or two-week later interval. This has the disadvantages of requiring a "passive transfer", the injection of this second individual, and the delay in the allergic survey. It has the advantage, of course, of making testing available to small children and other individuals whose rash or other allergic conditions make testing impossible or inadvisable.

PRACTICAL MANAGEMENT OF THE ALLERGIC PATIENT

This is important from the patient's viewpoint, whether done by the specialist or by the general practitioner. It would depend, of course, upon whether or not the symptoms are constant or seasonal. If we find that symptoms occur only in the spring, we think of the pollenation of flowers, grasses, trees, etc., as being the offenders. Where hayfever appears in the autumn, we usually think of ragweed or one of the fall grasses. A constant manifestation usually calls our attention to foods or to surroundings. A patient who is sensitive to wheat is going to have his allergy when he eats flour or any other food containing wheat products. A person who is sensitive to house dust will usually have his allergy wherever he runs into dust, whether at home, in his office, in his automobile, or any other place.

The time of recurrence is important. A lawyer patient of mine found that he was perfectly free of symptoms as long as he was in his office on the fifteenth floor, but when he drove out to his home in the evening, he immediately choked up with hayfever. At first, it was mild, and later severe, particularly when he was in his own yard, around his own shrubbery.

It is important to know whether the patient's condition incapacitates him sufficiently to hamper his job or is only of nuisance value when he is off his job. For example, a four-year-old patient of mine gets hayfever every night when she gets into bed with her father. We found that this was avoided if she slept in her own bed, in her own room. The fact that she was allergic to his pajamas, his bath powder, or his bed covers is of no economic value. Its nuisance value is important. But in other cases, we find that allergy frequently affects his money-making capacity, incapacitates him from carrying on a job properly, and otherwise interferes with his everyday family life.

Women who are sensitive to cosmetics may find it difficult to attend Sunday School and Church, or other social gatherings. The place of vacations may be determined by the vegetation there. A man who is fond of animals will certainly not do cattle-raising as an avocation if he is sensitive to cow hair. The place in which to live may be determined many times by the pollen bearing plants around the house. A patient may be perfectly willing to cut down the shrubbery around his own place, but could not expect his neighbor to destroy shrubbery that he spent a lifetime accumulating. Even a change of jobs is sometimes necessary to get in a balanced allergic environment. I had a patient once who had asthma constantly while she was in Shreveport, but had no attacks while with her sister and brother in Atlanta, Georgia for two years. It was not difficult to convince her where she should live.

THE ANTIHISTAMINES

The value of the antihistamine varies with the type of allergy the individual has, the length of time he has had the disease, and many other factors. It seems that every time we see a drug representative, his company has produced another antihistamine. The very fact that there are so many of them probably proves that they have some value in some cases, but are worthless in others. A sales representative told me recently that his company had just produced the eightieth antihistamine; that while there were seventy-nine already on the market, there was still need for another, all of which probably proves my previous assertion that each is

of some value in some cases, but of little value in others.

The eczemas are probably the hardest of the allergies to treat. When an optimistic salesman brags a little too much on his own product, I immediately ask him what it will do for an eczema. Usually he reluctantly admits the drug is worthless in eczemas. Asthma and hayfever usually respond most readily to the antihistamines.

In looking back over the antihistamines that have stayed with us and are still used by many physicians, we find that the list includes adrenalin, ephedrine, propadrine, benedryl, pyribenzamine, histadyl, and a few others. Combinations of these are sometimes of more value than either one. For example: ephedrine with amytal has been a favorite for many, many years, and is better than either alone. Adrenalin in a 1/1000 solution, adrenalin in oil, and adrenalin in glucose, 1/1,000,000 solution (IV) are very effective in asthma, hayfever and some of the dermatoses. Infusions of ephedrine, histadyl and other antihistamines may be very effective.

THE WONDER DRUGS

ACTH, cortisone and hydrocortisone were the wonder drugs developed originally for the treatment of rheumatoid arthritis. From this disease, their use has spread out through the whole gamut of human ailments, including the allergies. I think that most of us find that the same cautious use of either ACTH or cortisone in the case of asthma or some of the other allergies is justified. Certainly, when a child comes into our offices with a severe case of asthma or rash and has responded to no other treatment, we find that ACTH and cortisone will relieve the patient quickly and give us a greater opportunity to further study his allergic manifestations. Sometimes we find that the allergy has a secondary invader, and the addition of antibiotics is desirable. The dangerous side effects of these drugs, of course, have to be watched. The Cushing syndrome with its "moon-face" edema of the tissues, and the tendency toward diabetes itself is always a dangerous factor. All in all, while the wonder drugs are a big addition to our armentarium, they are not the final answer to the problems of allergy.

CONCLUSION

In conclusion, the general practitioner and the specialist in allergy must first work as a team if the patient is to get the best medical care. Second, the general practitioner must keep in constant training, and study constantly if he is to maintain an intelligent attitude towards allergic diseases. Changing methods and changing times have to be reckoned with, and he must not be "the last to lay the old aside." In other words, the general practitioner must keep up his basic training if he is to be of the greatest value to his allergic patients.

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RHEUMATISM RESEMBLING RHEUMATOID ARTHRITIS *

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NEW ORLEANS

The early manifestations of rheumatoid arthritis are so similar to those of a number of other musculoskeletal conditions that it may often be mistakenly diagnosed for one of these other less serious conditions. Since many of these latter diseases are more amenable to treatment than is rheumatoid arthritis, the physician must be certain that he has considered all other possible diseases which may mimic rheumatoid arthritis before he definitely makes such a diagnosis.

The cardinal symptom most frequently associated with rheumatoid arthritis is acute articular swelling, which is neither traumatic nor infectious. Other conditions which can in part mimic this condition include the shoulder-hand syndrome, hypertrophic pulmonary osteoarthropathy,

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gout, and combined osteo and traumatic arthritis. Serum sickness, paralysis agitans and "hypercortisonism" in patients with rheumatoid arthritis also have features which should be considered in this discussion.

SHOULDER HAND SYNDROME

The shoulder hand syndrome is a distinct clinical entity,[1] which is easy to recognize when fully developed. However, its varying manifestations, especially during the early stage, often make the differential diagnosis difficult.

Etiology: The onset may be characterized by symptoms referable to the shoulder, hand, or both, which may appear without apparent cause. It has been frequently reported after myocardial infarction, and may appear one week to six months after an attack of coronary occlusion. It has also been reported after hemiplegia, splinting of a fractured arm, manipulation of a shoulder, and abdominal operations.[2] I have seen several typical cases associated with severe emotional disturbances and following recent thoracic operations. Coventry [3] considered the syndrome to be a form of periarthritis characterized basically by pain, disuse, and the "pre-arthritic personality." The most striking feature of this personality is a passive apathetic attitude in a person with a low pain threshold and hypersensitive musculature. Usually their attitude is "I can't," "I've tried," or "It's too painful to move the arm." My impression is that this personality has not been characteristic in the patients in whom the syndrome developed after thoracic operations.

The first *clinical manifestation* may be a severe ache or burning pain in the shoulder which may become intense in a matter of a few days. The initial discomfort may be accompanied or followed by stiffness. Immediately, or usually within a few days or weeks, this pain extends down the arm into the elbow, forearm, and hand. Motion in the shoulder is usually restricted from the onset, and the patient soon recognizes a comfortable range of motion for the shoulder and extremity which he does not exceed by choice of movements.

Either initially or as the discomfort extends down the extremity, the entire hand, including the fingers, becomes uniformly swollen, red or cyanotic, and the fingers assume a partially flexed position. The fingers have been said to look like sausages. There is no tendency to spindling or fusiform swelling of the proximal interphalangeal joints. The hand may be moist and warm. Although the patient can shake hands, he does not do so with a firm clasp and the hand feels "woody." The subcutaneous tissue is indurated and sore, and nodules can be felt in the palm. Motion of the fingers or wrist is limited because of pain and the patient cannot completely close the fist. Characteristically, the joints are no more sensitive to pressure than other parts of the hand or fingers. With increasing pain the hand is guarded and the patient will even move it about with the opposite hand.

This acute or subacute involvement of the hand may continue for three to six months; whereas the discomfort in both the shoulder and hand may extend over a period of six to twelve months.

The acute stage may be brief, quickly passing into a subacute phase characterized by continued induration and slight swelling, and pain usually with motion or at night. This may exist for several months and is often the time when the patient is told he has "arthritis" and is subjected to the still too often futile practice of dental extractions, tonsillectomy, and search for foci of infection.

The chronic stage is manifested by residual stiffness of the shoulder and fingers of the hand. The fingers feel tight and are in a flexed position. The subcutaneous structures are firm and nodular, and fibrosis of the palm is prominent. The range of motion of the hand and shoulder is limited but probably comfortable within this range.

Roentgenograms made during the acute and subacute stages show soft tissue swelling, possibly along with some mild osteo-

arthritis of the interphalangeal joints. In the later stages osteoporosis is common.

Differentiation: The shoulder-hand syndrome differs from rheumatoid arthritis in several ways. These patients often give a history of coronary occlusion or some other associated precipitating factor. Moreover, they do not complain of the general fatigue characteristic of rheumatoid arthritis, and the joints of the hand are not any more uncomfortable than the adjoining structures. Finally, the resulting deformities of the two conditions are not similar and articular damage and narrowing are not demonstrable roentgenographically in the patient with the shoulder-hand syndrome.

No *treatment* has been successful in all cases. Best results have been obtained in cases recognized and treated early. Coventry [3] and Steinbrocker and associates [4] reported beneficial results from cortisone and ACTH, especially if administered early before fibrosis occurs. Whereas the latter authors considered as much as 200 mg. of cortisone or 100 mg. of ACTH necessary daily, Coventry reported favorable results from smaller doses. Smaller doses could be tried initially and the amount increased if necessary.

Suprascapular blocks with or without stellate ganglion blocks have relieved pain and swelling and have increased the range of motion in several of my patients. Jespersen [5] reported improvement following stellate ganglion block in 10 out of 16 patients.

As disuse of the shoulder results in further periarthritis of that joint, motion of the involved extremity is essential. These patients usually require the help of an understanding physical therapist, for if left to their own initiative, they will benefit only partially from exercise and this partial improvement will give them a false sense of security. The therapist must assist the patient with motions of the involved joints and teach him to move the extremity as much as possible.

Local applications of heat may temporarily facilitate the exercise. Diathermy may cause additional reflex stimuli, and moreover has no advantage in such cases. Splinting of the involved hand may provide temporary relief.

HYPERTROPHIC PULMONARY OSTEOARTHROPATHY

Carcinoma of the lung associated with acute hypertrophic pulmonary osteoarthropathy can simulate rheumatoid arthritis. Hansen,[6] and more recently, Jarvinen and Knumlin [7] reported articular symptoms resembling rheumatoid arthritis in patients with carcinoma of the lung. Craig,[8] Alvarez [9] and Pattison and associates [10] noted the frequency with which symptoms referable to the bones and joints precede the pulmonary symptoms. These patients usually seek medical aid because of the painful joint, most of whom are treated for rheumatoid arthritis before the primary pathologic condition is diagnosed.

Etiology: The cause of pulmonary osteoarthropathy and of the associated articular symptoms remains unknown. Reduced pulmonary aeration with low oxygen saturation has been suggested. Reduced oxygen tension in circulating blood of the extremities has also been considered to play a role in this phenomenon. These theories appear unlikely because often the pulmonary carcinoma is small and the articular symptoms will subside following pneumonectomy. Alleviation of articular symptoms following ligation of the pulmonary artery has been observed.[11] As in the shoulder-hand syndrome, it is assumed that reflex stimulation in the autonomic nervous system can result in articular swelling. On the basis of gynecomastia and acromegalic features in a representative number of patients with hypertrophic pulmonary osteoarthropathy Fried [12] suggested an endocrine factor.

The *clinical manifestations* consist in redness and swelling of the joints, increased warmth in the articular areas, and painful and limited motion of the joints. Fluid may be increased in the involved joint and this site is exquisitely tender. Bilateral symmetrical involvement is common in the large articulations. Atrophy and weakness of the small muscles of the

upper extremities may be noticeable. Hyperhidrosis of the hands and feet also occurs.

Differential Diagnosis: The foregoing are common manifestations of both rheumatoid arthritis and hypertrophic pulmonary osteoarthropathy. However, patients with cancer of the lung and hypertrophic pulmonary osteoarthropathy are usually between 50 and 60 years of age whereas those with rheumatoid arthritis are between 25 and 50 years of age. In the former group of patients the shafts of the long bones usually ache and are tender, a complaint not too common among patients with uncomplicated arthritis. Clubbing of the fingers may appear so late as to be of no aid in the initial differential diagnosis. When associated with chronic pulmonary suppuration and congenital heart disease it is usually painless; whereas it is usually painful in patients with osteoarthropathy associated with carcinoma of the lung. The presence of acromegalic features with or without gynecomastia would suggest articular changes associated with a pulmonary malignancy.

Laboratory studies do not aid in the differentiation of the two conditions. An elevated sedimentation rate, anemia, and leukocytosis may be found in both conditions.

Roentgenograms of the joint show soft tissue swelling, possibly some slight degree of osteoporosis in the articular ends of the bones and periosteal thickening of the adjoining bone which may be pronounced and irregular or serrated. Roentgenograms of the chest usually reveal a pulmonary tumor. The type of lesion can then be determined by histologic examination of the sputum, bronchoscopy, biopsy of the primary lesion or a metastatic node if present. There seems to be no connection between the histologic types of pulmonary tumor and hypertrophic pulmonary osteoarthritis.

The *treatment* of hypertrophic pulmonary osteoarthritis secondary to a pulmonary tumor is pulmonary resection, which is followed by prompt relief of the arthritic symptoms. Roentgen ray treatment of the primary disease in the lung has also been followed by improvement in the arthritis.

GOUT

Gout and gouty arthritis continue to be mistaken for traumatic, infectious, and rheumatoid arthritis. The *clinical picture* of gout may be characterized by chronic arthralgia of many months' duration. The initial joint affected may be one other than the classical site in 30 to 40 per cent of patients. Tophi are rarely present with the initial attack and may never appear. Fever of significant degree may accompany the acute attack and prove a distracting clinical feature. Muscular atrophy, especially about the large joints, may cause a chronic disability and give the impression that the arthritis itself is active or incapacitating. Today, few patients with gout give a history of dietary indiscretion, which was formerly associated with this disease. Whereas in gout bilateral symmetrical involvement of joints is not typical, not infrequently one joint may be involved, then subside partially only to have the symmetrical joint on the opposite side become equally swollen and painful. These variations in the clinical picture from the classical attack of podagra still add confusion to the correct early diagnosis of gout and lead to utilization of therapeutic measures for rheumatoid arthritis.

In patients demonstrating none of the foregoing features the *diagnosis* of gout may be established more readily if its possibility is considered in all arthritic patients. The absence of fatigue in the patient with articular swelling is more characteristic of gout than rheumatoid arthritis. In my experience the temporomandibular joints frequently become sore, stiff or uncomfortable in patients with rheumatoid arthritis but not in those with gout. Patients with gout often come to recognize a pattern of progression of involvement in which eight to forty-eight hours before the most painful phase of the attack there is a burning, tingling,

stiffness or a different type of pain at the same site, which serves as a *warning sign.* History of renal stone is also evidence in support of a diagnosis of gout.

Elevated uric acid level is, of course, most helpful and serum uric acid determination should be done in every patient with arthritis. Normal serum uric acid level in suggestive cases of arthritis does not mean that the patient does not have gout for frequently it will eventually become elevated. Often, the most expedient diagnostic aid is a course of colchicine, consisting of oral administration of 1/100 gr. tablets every two hours until nausea, vomiting, or diarrhea develops or pain is relieved.

Treatment of gout may be considered in two parts: management of the acute attack and long range control. The acute attack can best be handled by the early adequate administration of colchicine. The most effective dosage is the same as that used for diagnostic purposes. It should be given as soon as there is any suggestion of a gouty attack, and possibly continued in smaller daily doses (1/100 gr. once or twice daily) for ten to fourteen days following complete subsidence of all evidence of arthritis. This may prevent a recurrence during the convalescent period. The patient should be kept in bed, especially if weight bearing joints are involved. Ambulation is best avoided until all evidence of inflammation has subsided. Local application of heat or cold may alleviate the pain.

Aspirin in large daily doses can also relieve some patients with gout. ACTH along with colchicine may be effective in colchicine resistant cases. Phenylbutazone may alleviate the acute attack of gout and is welcomed by those patients who react unfavorably to colchicine. Unless close medical supervision is maintained, patients should not be given phenylbutazone for more than five to seven days.

Between attacks the patient's diet should be supervised so as to correct or prevent obesity, to eliminate excessive high purine foods, to maintain a high fluid intake and if necessary to alkalize the urine to avoid excessive uric acid, which would hasten recurrent acute attacks. Large daily doses of aspirin serve as a uricosuric agent and often alleviate some of the chronic gouty arthritic discomfort. Benemid is an effective uricosuric drug. In many instances it appears to reduce the number of acute recurrences and diminishes the chronic disability. It is of no value for treating the acute attack.

The injection of Compound F (hydrocortisone) may be useful during an acute attack or in a patient with chronic symptomatic gouty arthritis.

OSTEOARTHRITIS, OBESITY, AND TRAUMA

The most common articular disease, osteoarthritis, is seldom mistaken for rheumatoid arthritis. However, the obese patient with osteoarthritis of the knee occasionally presents a clinical picture suggestive of rheumatoid arthritis. Mild trauma, such as excessive walking, standing or carrying a heavy object, causes these patients' knees to become swollen, tender, red, warm, and painful on motion. The patient is usually afraid to stop walking lest his knees "freeze up." Consequently, the joints continue to be irritated and chronic disability results. The condition affects older people in whom fatigue is not uncommon. This may cause the physician to consider rheumatoid involvement. The picture may appear still more like rheumatoid inflammation because of atrophy of the adjacent musculature and the occurrence of slight flexion deformities. The most common site to which this applies is the knee joint. The anterior thigh musculature in such patients often is so greatly atrophied that the knee joint lacks stability, adding further to incapacitation.

These patients are practically always women who have already undergone the menopause and who have a long history of obesity with recent gain in weight. The knees are often so fat that it is difficult definitely to identify any inflammatory swelling. Questioning reveals one or more days of unusual activity, such as

shopping all day during sales or holding a grandchild for long periods while standing. The patient usually obtains some relief with rest and feels worse with activity. The body stiffness or jelling characteristic of rheumatoid arthritis is lacking. Although they often complain of fatigue, this is not utter exhaustion and it alone does not limit their activities. Absence of acute synovitis in other joints also helps exclude rheumatoid inflammation.

Treatment: These patients frequently respond promptly to absolute rest in bed for one or two weeks during which time local application of heat adds to their comfort. With improvement the extremities involved should be lightly massaged and exercised to restore and preserve muscular strength.

Injections of Compound F into the joint help to shorten the period of rehabilitation, for by alleviating the pain and swelling, it permits early ambulation and physical therapy to restore muscular strength and full range of motion in the joint. If Compound F is not used, aspirin or other salicylates usually suffice to counteract pain. The need for narcotics suggests more significant disease.

A light support for the knee, or brace, may be helpful in governing stability of the involved joint but seldom need this be elaborate. Weight reduction is, of course, the cardinal aim, and unless it is accomplished, the condition will either not be completely alleviated or will recur.

OTHER CONDITIONS

The classical picture of paralysis agitans offers no diagnostic problem. However, several features of the disease sometimes cause confusion in diagnosis and treatment. The patient with early Parkinsonism has only suggestive complaints of articular soreness and stiffening, which he and his family attribute to disease in the joint. When these complaints are coupled with limited use, and occasionally, mild swelling of the hand, the clinical picture may become more confusing. Hemi-Parkinsonism makes the picture even more bizarre and may lead to therapeutic measures directed primarily to the joints.

The patient with well established paralysis agitans may also be troubled primarily with discomfort in the joint and pain in the spastic upper extremities. Although it may be tempting to treat the arthralgia as a separate entity, this is best handled by primarily treating the Parkinsonism.

Differentiation of these cases from rheumatoid arthritis is not difficult if such possibilities are kept in mind and the neurologic status is fully evaluated. Effective therapy for the paralysis agitans usually alleviates the articular discomfort as well.

The widespread use of antibiotics, especially penicillin, has made subsequent sensitivity reactions relatively commonplace. These reactions are often marked by generalized arthralgia and occasionally there is definite bilateral symmetrical articular swelling, which, when combined with the associated malaise can mimic the early picture of rheumatoid arthritis. Serum sickness can result in similar symptoms. The history of previous administration of antibiotics, the presence of a rash, and the absence of muscular atrophy are often the only major differentiating points. Time, ACTH, and cortisone have been helpful therapeutic aids to control symptoms until the allergic reaction subsides. It is sometimes necessary to continue this therapy for weeks.

Slocumb [13] called attention to the development of a condition in patients with rheumatoid arthritis who receive excessive doses of cortisone, which he called "hypercortisonism." The symptoms, which are suggestive of a rheumatoid exacerbation, include exaggeration of the stiffness, aching, pain or soreness. This is seldom associated with increased synovitis or tenderness, as would be expected in a recurrent attack of rheumatoid arthritis.

SUMMARY

The painful swollen joints of early rheumatoid arthritis can sometimes be mimicked by the arthritis of other conditions, such as shoulder-hand syndrome, hyper-

trophic pulmonary osteoarthropathy, gout, osteotraumatic arthritis of the knee, serum sickness, and paralysis agitans. Differentiation is essential for proper management.

REFERENCES

1. Steinbrocker, O., Spitzer, N. and Freidman, H. H.: The shoulder-hand syndrome in reflex dystrophy of the upper extremity, Ann. Int. Med. 29:22 (July) 1948.
2. Robinson, N. D. et al.: Rheumatism and arthritis; review of American and English literature of recent years, Ann. Int. Med. 39:751 (Oct.-Nov.) 1953.
3. Coventry, M. B.: Problem of painful shoulder, J. A. M. A. 151:177 (Jan. 17) 1953.
4. Steinbrocker, O.: ACTH and cortisone as therapeutic agents in arthritis and some locomotor disorders, Bull. New York Acad. Med. 27:560 (Sept.) 1951.
5. Jespersen, K.: Cervical sympathetic block in periarthrosis of shoulder joint with secondary reflex dystrophy, Ann. Rheumat. Dis. 8:220 (Sept.) 1949.
6. Hansen, J. L.: Bronchial carcinoma presenting as arthralgia. Acta. med. Scandinav. (supp. 266) 142:467. 1952.
7. Jarvinen, K. A. J. and Knumlin, T.: Carcinoma of the lung simulating early rheumatoid arthritis, Ann. Rheumat. Dis. 13:52 (March) 1954.
8. Craig, J. W.: Hypertrophic pulmonary osteoarthropathy as first symptom of pulmonary neoplasm, Brit. M. J. 1:750 (April 10) 1937.
9. Pattison, J. D. Jr., Beck, E. and Miller, W. B.: Hypertrophic osteoarthropathy in carcinoma of the lung. J.A.M.A. 146:783 (June 30) 1951.
10. Alvarez, G. H.: Clinical diagnosis of cancer of lung, Rev. med. Argent. 62:690 (Nov. 15-30) 1948.
11. Wyburn-Mason, R.: Bronchial carcinoma presenting as polyneuritis, Lancet 1:203 (Feb. 7) 1948.
12. Fried, B. M.: Chronic pulmonary osteoarthropathy; dyspituitarism as probable cause, Arch. Int. Med. 72:565 (Nov.) 1943.
13. Slocumb, C. H.: Relative cortisone deficiency simulating exacerbations of arthritis, Bull. Rheumat. Dis. 3:21 (Oct.) 1952.

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THE PHYSICIAN'S ROLE IN A COMMUNITY HEALTH PROGRAM *

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Every physician, by the very fact that he assumes the care and treatment of a human being, must likewise assume a role of responsibility for the patient's mental and emotional well-being. This fact applies equally whether the physician be engaged in general practice or one of the more specialized fields. The surgeon cannot adequately treat and care for his patient if he loses sight of the fact that the examination procedure, presence of disturbed function or diseased tissue, and the possibility of some surgical procedure all have a psychological impact on the individual. The obstetrician cannot adequately offer prenatal care to the mother and plan for the ultimate delivery without giving proper consideration to the psychological aspects of this female function, which may be considered a normal physiological function of the female by every one except the patient. The gynecologist would be guilty of wanton neglect if he failed to consider his patient's psychological involvement in what happens to her genital organs. The E.N.T. man who so glibly says that the child's tonsils must come out should also recognize that this child will be exposed to one of the generally recognized most traumatic psychological experiences of his or her life and should approach the procedure accordingly. Thus, might we go on and enumerate each specialized field and point out the responsibility of the physician which would only, in final analysis, be a restatement of the fact that the psyche and soma are inseparable and there is an interdependence as to their health and well being.

Consequently, we must recognize that the primary role of every physician in any mental health program which involves the patient, and therefore the medical community, is that of a first line of defense. He must at all times be alert and aware as to the effect his approach to and handling of the physical problems may have upon a patient. He must be sensitive to the psychological aspects of the various physical and organic disorders, and at the same time cognizant of the psychological disorders which may be responsible for and producing somatic symptoms or functional disorders. By sensitive awareness and understanding, he will be doing much to promote the mental health of his community and, at the same time, utilizing his expert skill to restore and improve their physical health.

The patient is a human being with worries, fears, hopes, and despairs, and not merely a bearer of organs. As such, he has become an object of medical interest and in the last two decades has for

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this reason demanded increasing attention as to the causative role of emotional factors in disease. With a growing psychological orientation among physicians, there is an increasing attempt through modern scientific medical psychology to place medical art, the psychological effect of the physician upon the patient, on a scientific basis and make it an integral part of therapy. This undefined emotional rapport between physician and patient is with little doubt the factor in much of the therapeutic success of the healing profession. Today there is a growing acceptance of the concept that local anatomical changes themselves may result from more general disturbances which develop in consequence of faulty function, excessive stress, or environmental factors.

Modern clinical medicine has become divided into two portions—one, considered the more advanced and scientific, includes all disturbances that can be explained in terms of physiology and general pathology; (for example, organic heart defects, diabetes, infectious diseases, etc.) and the other, considered less scientific, which includes a great conglomeration of ailments of obscure, frequently psychic, origin. This has resulted in a tendency to force more and more diseases into the etiological scheme of infection, where pathogenic cause and pathological effect appear to have a comparatively simple relationship to each other. When the infectious or organic explanation fails, the modern clinician is only too ready to console himself with the hope that some time in the future, after more details of organic processes are known, the psychic factor, unwillingly admitted, will eventually be eliminated. However, gradually more and more clinicians with a broader perspective have come to recognize that even in physiologically well understood disturbances, such as diabetes and essential hypertension, only the last links in the causal chain are known and the primary etiological factors still remain in darkness. There exists a peculiar discrepancy between the official theoretical and the factual practical attitude of the physician in his practice. In his scientific contributions, in his addresses to medical groups, he will stress the need for knowing more and more details about the underlying physiological and pathological processes, and he will refuse to believe seriously in psychogenic ideology. In his private practice, however, he will, without hesitation, advise his patient suffering from essential hypertension to try to relax, take life less seriously, avoid over-work, and he will try to convince his patient that his over-active, over-ambitious attitude in life is the real source of his high blood pressure. It is felt that the practitioner assumes a somewhat dogmatic antipsychological scientific attitude only because he does not know exactly how this psychic element works and because it is so contradictory to everything he has learned during his medical training and because the recognition of the psychic factor seemingly disrupts the consistency of the physiochemical theory of life, and therefore he tries to disregard the psychic factor as much as possible. However, when confronted with his patients, he is forced to pay primary attention to this factor and although he may identify it as medical art, it is actually the deeper intuitive knowledge which he has obtained during the long years of his clinical experience.

Might it be suggested then that the physician assume a more conscious psychosomatic orientation in medicine and thereby serve an important role in the mental health of his patient and community.

It would be most difficult for a physician either to recognize the need of his patient or to be able to recommend appropriate measures for relief of symptoms and ultimate rehabilitation, if he himself was not fully aware of the implications of symptoms and possibilities for the various types of therapy. It may thus be assumed, as a responsibility of every physician to develop an awareness of the symptoms of emotional illness, both in the more subtle lesser degree and more evident and disturbing aspects. Every opportunity should be taken to acquaint one-

self with the fundamentals of psychopathology and psychodynamics. There should be an open-minded recognition of the possibilities of the various types of therapy and an avoidance of any inclination to unduly favor, recommend, or insist upon a type of therapy because it may be more easily accepted as something being done for the patient. Acquisition of such knowledge and information by the physician would enable him to enlighten his patients and thereby relieve some of their distress, and in doing so he would be taking the role of an educator in mental health.

The patient-physician relationship has always been one that was characterized by a mixture of trust, affection, and even adoration. Even though this relationship which was exemplified most by the family physician, now almost extinct in some areas, has been endangered by the highly specialized, mechanized, antibiotic approach of our profession at this time, it still exists and as such should be recognized and utilized to the advantage of the patient and not to the narcissistic edification of the physician. This relationship places the physician in a strong position to advise and influence the patient in his thinking and attitude toward himself and the physical or mental aspects of his being. Consequently, the physician can and should utilize this opportunity to enlighten the patient and dispel some of his old fears and prejudices in matters of acceptance of emotional disturbances in themselves and others. They should be helped to recognize that to be told that their symptoms are functional or emotional in origin does not imply they are victims of their own imagination or that they are in any way bordering on a delusional hypochondriacal state. Furthermore, they should be helped to understand that when any type of psychiatric help is recommended this does not label them as insane and there is no need to immediately mobilize all their resources in an effort to deny and hide from others any suggestion of their disorder. It should be pointed out to the patient that it is a fallacy to attempt to reassure himself by avoiding psychiatric help or even his frequent attempt in making extensive effort to keep such help a closely guarded secret. This supportive and reassuring role of the physician can play an important role in the mental health of the ill persons he may come in contact with.

A commission, headed by Dr. Dan Blain, recently made an exhaustive survey of the facilities and needs of the State of Louisiana for psychiatric care and promotion of mental health. The essence of these reports was that the principal efforts be directed toward early care and preventive measures at a local community or regional level. We, as physicians, should be heartily in accord with and endorse such a program as it has most to offer in terms of practicality and facility and would do much to insure every opportunity for the emotionally ill person to receive early and appropriate care. One of the provisions of the Hill-Burton Bill was that facilities be provided in general hospitals for the treatment of psychiatric patients. The physician should express his approval of this adea at his own hospital and cooperate wherever possible in promoting the establishment and use of such facilities for these people of his community. By encouraging and helping to establish such facilities, the physician is assuming an important and effective role in his community's mental health program.

In summary, it should behoove all of us as physicians to exert every effort to bring about a state of general well being, including mental health, in our patients and all members of the community. To reiterate how we may best serve in this role, I should like to suggest (1) an individual awareness of the psychological effect of our approach to and treatment of the patient. (2) An honest recognition of our own feelings toward the ideas and concepts of psychological and emotional factors and the part they play in the etiology and cause of any illness. This would mean an unprejudiced and honest effort to entertain the newer principles of the

psychosomatic orientation of medicine and avoid a zealous reluctance to question the exclusive physiochemical orientation. (3) A personal effort to become more enlightened upon what psychiatry has to offer a great number of your patients and to allay some of their and our old prejudices. (4) To serve as a source of information to our patients so that they may more clearly understand and be able to accept an emotional illness or disordered thinking and behavior, together with psychiatric care, as something other than a stigma. (5) That each individual physician assume an active interest and role in promoting and supporting all functions and facilities in his community which have as their purpose the aid and treatment of the emotionally ill person.

REFERENCE

1. Alexander, Franz: Psychosomatic medicine, W. W. Norton, 1950.

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THE PROBLEM OF DYSPAREUNIA AND FRIGIDITY *

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NEW ORLEANS

With the recent widespread interest in human sex relationships it is apropos at this time to discuss certain problems arising in connection with sex adjustment in women.

Moving pictures, advertisements, novels and the overwhelming public preoccupation with sex tend to make one believe that the average American woman is not only well adjusted but perhaps more strongly sexed than usual.

To the gynecologist this is very far from true. Actually, frigidity, dsypareunia or neuroses associated with sex maladjustment constitute the most frequent psychosomatic problems encountered.

It has been estimated that 25 per cent or more of women are frigid, or have relatively weak sex response as determined by orgasm. Frigidity must be adequately defined, since the term as used covers many meanings, such as dsypareunia, lack of libido, vaginal anesthesia, etc. Many people feel that frigidity is due to some sort of physical inadequacy in the genitalia, or due to failure in sex technique. However, it has been fairly well established that in most women the genitalia are quite adequate for sex relations and indeed that vulvectomy and hysterectomy may not hinder active sex response; and finally, that women may achieve orgasm without actually having intercourse.

Frigidity then is a psychosomatic disorder or a neurosis with strong psychic inhibition either conscious or subconscious and is exhibited by failure to achieve orgasm. Orgasm in the female is a complex psychogenic experience, the physiology of which has not yet been completely determined. Whether the seat of orgasm is clitoridal or vaginal has been held to have some diagnostic value. Knight [1] believes that clitoridal orgasm represents an immature response in which transference of attention to the vagina has not taken place because of fixation in childhood on the clitoris as the substitute for the penis; hence the mature response or vaginal orgasm is inhibited.

I believe that we must disagree somewhat with this theory because numerous case histories reveal that the clitoris plays a tremendous part in initiating sex impulses and because of its position and its homologous relation to the penis anatomically and embryologically it may well be designed to play a major role in the mechanism of orgasm.

The many ways in which orgasm is inhibited psychically have been studied extensively and there is a tremendous wealth of material on the subject. One may well become lost in the maze of psychiatric interpretations of the origins of this neurosis including such theories as penis envy, castration complex, narcissism, masochism, maternal hatred, father hatred, homosexuality, nymphomania and many more. It is not my purpose, nor do we

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have the time today to elaborate on these psychosexual theories. We cannot dismiss them lightly because in many special cases their significance becomes obvious. It is my belief, however, that many cases of frigidity can be traced back to causes which we can treat as general practitioners and as gynecologists and which are not so deep seated as to require special psychiatric care.

We can broadly classify frigidity as being due to

1. Causes due to deep rooted psychosexual conflicts.

2. Those due to readily recognizable situational or environmental factors.

It is the latter that I shall emphasize today.

One cannot stress too strongly the necessity of giving the patient time to tell her story and of becoming acquainted with the physician and his sympathetic attention, so that reticence is abolished and the often embarrassing details, which so frequently constitute the real background of her visit, are disclosed.

Once rapport is established it becomes relatively easy to ask such questions as are pertinent and one can piece together a background indicating that the chief complaint, often physical in character, such as backache, weight in the pelvis, pelvic pain, menstrual dysfunction, actually has its origin in psychosexual disorders notably frigidity or incomplete sex response. As we take the history in a case of frigidity, it is convenient to question the patient in an orderly manner which can be outlined as follows:

1. Certain conflicts arise in childhood and early adolescence and are significant of lack of emotional development. These will include homosexuality, infantile fixations, narcissism, asceticism, father hatred, Oedipus complex, etc. and if our questions reveal such a background the patient should be referred to a psychiatrist.

2. Other conflicts in childhood and early adolescence are:

a. Lack of education in sex psysiology and sex technique.

b. Deep rooted moral and religious prejudices.

c. Fears, disgust or revulsion instilled by parents, educators or companions or religious instructors.

d. Social prejudices and fears referable to menstruation, lactation and child bearing.

3. In the young adult we find inhibition resulting from:

a. The shock of the first sex experience.

b. Fear of defloration.

c. Unusual sex experiences as rape, perversion and rather frequent cause in young girls, viz., that of male exhibitionism.

d. Fear of venereal disease.

e. Sense of shame, embarrassment or guilt.

4. When we begin questions about the marriage itself we find numerous factors quite tangible and discernible.

a. One of the most tragic is the choice of the wrong mate and often the simple question, "Do you love your husband?" will bring a flood of tears and a painful story of disillusionment and disappointment. The term facultative frigidity is applied in those cases in which the woman is frigid for one mate but not necessarily frigid for another and I suppose the many marriages of Hollywood actors and actresses and others represent a constant search for the right mate—the woman not realizing however that the basic narcissism makes this impossible.

b. The conduct of the wedding night has been given as a frequent cause of frigidity in sensitive women. However this is not noted as a common cause so often today. It has in turn given way to:

c. Pregnophobia, which I can safely say is one of the major causes of inhibition in the sex relationships. One of my patients admitted to sex abstinence for seventeen years following the painful birth of several

children (which I did not deliver, incidentally.)

d. Waning interest of the husband and infidelity are frequent factors which cause anger, and repression of her own sex impulses in the woman.

It must be remembered that harmonious relations in marriage depend on the husband as well as the wife and if our patient does not have orgasm we must inquire into

e. Impotence or premature ejaculation.

f. Onanism.

g. Inepitude in sex technique.

In this latter instance the matter of technique is not as important as the realization that there is frequently a time deficit when there should be concurrence of orgasm. The average male may achieve orgasm in three to five minutes, while it is frequently noted that women being more passive and taking a longer time to respond may require fifteen minutes or longer to achieve climax. This deficit is responsible not only for much unhappiness but the chronic tumescence resulting therefrom frequently causes pelvic congestion, ovarian pain, chronic discharge, backache, and occasionally menstrual disturbances.

h. In modern marriages, as might be expected, other factors play a role and differences in social and intellectual interests may well be the starting point for loss, particularly in the woman of her "sex ideal."

5. Outside of the actual marriage certain environmental factors can play an important role among which can be mentioned:

a. Living with relatives and inlaws. This is an exceedingly common cause for loss of sex intimacy and inhibition and many cases could be cited not only of frigidity but of actual broken marriages when the mother or mother-in-law not only meddles in the every day affairs of the young couple but comments on their nocturnal activities as well.

b. Too close relationship with children, as when living space is too crowded.

c. Insufficient income with the wife sharing in the support of the family.

d. Illness of a constitutional type.

e. Overwork, fatigue, and anxiety of financial, social and child rearing problems.

This has been a rather long list of causes for frigidity but I believe that they illustrate a practical approach as far as situational or environmental factors are concerned. It is only fair to state, however, that to the psychiatrist these represent superficial causes. He will hold for example, that if a woman is apparently frigid because rape was attempted on her:

1. Many women may have had attempted rape without becoming frigid.

2. This particular woman may have some deep rooted conflict for example a guilt complex in which the attempted rape represented a masochistic satisfaction.

I have no quarrel with the study of the deeper layers of the neuroses, however, I do feel that in our scientific analyses we can somehow lose sight of the problem at hand.

To return to our victim of attempted rape in young adulthood. If we can convince her that her husband is a fine man and that the incident in her life was unusual, accidental and the result of extenuating circumstances, and reorient her attitude to the role of wife and mother by patient instruction, I think we can go far toward helping her to adjust. I dwell on this instance because one such patient not only adjusted but actually became the dominant partner later on.

The most satisfactory results in treating this condition as in so many other medical conditions come from prophylaxis.

If a young woman comes for premarital advice and examination, or better, a young couple, to frankly talk over the questions so frequently unanswered, or partly answered by friends, parents, educators,—one will almost invariably find a quicker and happier marital adjustment and a more intelligent and less embarrassed approach to sex problems.

The patient who comes in with the story of frigidity for fifteen years can

seldom be helped, nor can we advise the unfortunate victim of facultative frigidity to get another mate, without dire consequences.

Any discussion of frigidity entails recognition of a closely related condition which is in part of psychosomatic origin. This is dyspareunia and refers to painful or difficult intercourse.

Dyspareunia can be anatomical as a result of a rigid or imperforate hymen or a too tightly closed episiotomy or vaginal absence. It can also be caused by septate vagina, synechiae of the vagina, neoplasms, vaginal atrophy, condyloma, granuloma, and numerous other physical and pathological factors. When it is associated with frigidity, dyspareunia is caused by vaginismus which is a powerful spasm of the levator and bulbocavernosus muscles brought about by strong subconscious inhibition and makes intercourse all but impossible.

Local treatment consists in the use of graduated dilators, which the patient inserts herself, at home during the day and before intercourse. Re-education and reorientation are of course employed at office visits.

If necessary, the outlet may be widened by a small plastic operation on the perineum.

Occasionally, we find lack of sex stimulation in the patient with a widely relaxed perineum and some patients actually request repair when this condition obtains. Kegel's exercises have been advocated in the postpartal period to prevent this type of frigidity, and are well worth trying.

No discussion of frigidity or dsypareunia would be complete without mention of drug or endocrine therapy.

In general drug therapy for frigidity has relatively few advocates today although the sale of aphrodisiacs over drug counters still goes on apace, especially in the Negro population. The use of hormones especially testosterone stems from the reports that women with breast cancer treated with androgens have occasionally shown some increase in libido.

Assuming that frigidity is a neurosis it is difficult to see how drug therapy can be of any avail.

Having established the diagnosis there are many things we can do to help the patient to a satisfactory adjustment. First we can eliminate physical causes inasmuch as they play a part by:

1. Treatment of inflammation.
2. Repair of relaxed perineum.
3. Kegel's exercises.
4. Hymenotomy, when indicated.
5. Vaginal dilators for vaginismus.
6. Plastic construction of a vagina, when absent.
7. Removal of tumors or surgery of local pathology.

More important however and in the majority of cases of frigidity we can employ one of the following:

1. Authority and confidence regarding sex matters.
2. Kindly interest and sympathetic help in gaining insight into the sex problem.
3. Dispel ignorance, fears and taboos.
4. Frank discussion, and sex education in physiology, and technique using dignified but simple language and anatomic plates where necessary; as many lay people have but sketchy knowledge of genital anatomy.
5. Contraceptive advice when indicated.
6. The use of authoritive books or sex manuals.
7. Premarital examination and counseling.
8. Referral for psychoanalysis.

REFERENCES

1. Knight, Robert P.: Functional disturbances in the sexual life of women, Bull. Menninger Clin. 7:25, (Jan.) 1943.
2. Deutsch, Helene: The Psychology of Women, Grune & Stratton, Vol. 1, 1945.
3. Stekel, William: Frigidity in Women in Relation to Her Life. Translation by James Van Teslaar, Boni & Liverwright, New York, 1926.
4. Kegel, Arnold H.: Sexual functions of the pubococcygeus muscle, Western J. Surg., Gynec. & Obstet., 60:521, (Oct.) 1952.

HEARING SURVEY AMONG 3500 NEW ORLEANS SCHOOL CHILDREN

JACK R. ANDERSON, M. D.
WALLACE RUBIN, M. D.
NEW ORLEANS

There are no available figures as to the incidence of hearing loss in our school

population because Louisiana is one of thirteen states without a routine school hearing testing program. This should be a matter of deep concern inasmuch as various studies throughout the nation reveal that about 5 per cent of school age children have some hearing impairment and that in two to three per cent the loss is severe enough to be considered handicapping. Furthermore, authorities have frequently emphasized the desirability of discovering hearing losses and their commonly associated speech disorders, as early as possible in school life.

We conducted a pilot study in 500 first grade children in the parochial schools of New Orleans during the early months of 1953, so that we could compare the incidence of school age hearing loss in our community with that in other states. Our experience in the pilot study was such that 3500 additional children were tested during the 1953-1954 school year. The following is a report of the findings of this study, some of the problems encountered, and the conclusions which we have reached.

MATERIAL AND METHOD

At the outset, we must emphasize that we are aware of the variations which exist in the reported statistics on the frequency of hearing impairment in children. There are several explanations for this, among the most common being variations in testing techniques, lack of control of acoustic conditions in the testing environment, and the well-known tendency of children to exhibit fluctuations in hearing thresholds. Our aim was therefore to obtain the most accurate information possible within the framework of these limitations.

As was mentioned previously, it is most desirable to discover school age hearing loss as early as possible; therefore, it was decided to test first grade children during the pilot study. We must admit that we were dubious at first as to the cooperation we would receive from the six year old first graders. This doubt as to their ability to cope with the testing method was soon dispelled, and we were able to complete both the pilot and the extended study with this age group.

Funds were not available for paid personnel, so mothers whose interest had been stimulated by discussions in their mother's clubs were trained in the pure tone screening technique until we were certain that they were capable of performing the tests. During the time the screening tests were done in the various schools, an experienced technician was available to assist these mothers when special problems arose.

The screening tests were done with portable audiometers in the quietest room available in each school. Each child was sweepchecked in each ear for the frequencies 250, 500, 1000, 2000, 4000, and 8000 double vibrations. Any child who showed a loss of *more* than *20* decibels in one or more frequencies was considered to have failed the screening test and was given an appointment to appear at a later date with a parent for a complete threshold hearing evaluation. At this time, a complete ear, nose and throat history was obtained from the parent, the child was thoroughly examined, and the hearing threshold for all frequencies was determined in sound-treated rooms. An explanation of the cause of the hearing defect was given to the parent and a recommendation to consult a physician of the parent's own choosing was made. The parent was also informed that, during the next school year, the child's hearing would be rechecked to determine whether the defect had been corrected.

RESULTS

The results of the survey will be found in Table 1. Of the 3500 children tested,

TABLE 1
RESULTS OF SURVEY

Total Children Tested (Screening Technique)	3500
Failed Screening Test	245
Appeared For Recheck	150
Normal On Recheck	95
Significant Hearing Loss	55
Conductive Hearing Loss	50
Perceptive Hearing Loss	5
Parents Aware Of Hearing Loss	11

245, or 7.0 per cent, failed the screening test. Only 150 children, or 61 per cent of

those who failed the screening test, appeared for a recheck examination. Of the 150 children rechecked, 55 were found to have significant hearing loss; though the number is admittedly too small to be conclusive, this figure would indicate that about one third of the children picked up in routine screening surveys will prove to have significant hearing losses.

The hearing loss in 50 of the 55 children was due to interference with the sound conducting mechanism. It has been repeatedly shown that 75 to 90 per cent of the cases with conductive hearing loss are completely reversible, provided adequate treatment is administered before permanent changes in the middle ear or hearing nerve have occurred.

Five of the children, or about 10 per cent, had a nerve type of hearing loss which could not be corrected, but required such rehabilitative measures as the use of hearing aids, speech and auditory training, and special consideration in the classroom.

Of the 150 children rechecked, 95 proved to have normal hearing on careful re-examination. Such fluctuation in hearing acuity is most often present because of intermittent Eustachian tube blockage due to nasal allergy, upper respiratory infection, and other such conditions.

Of 55 parents with hard of hearing children, only 11, or 20 per cent, were aware of the condition prior to testing.

PROBLEMS ENCOUNTERED

Parental education was not as effective as it should have been and many of the difficulties encountered during the course of the survey were from different aspects of this problem.

Funds were not available and it was necessary to rely on volunteers completely. We were obliged to secure certain key personnel and indoctrinate them with an understanding of the importance of the work to be done. These individuals, in turn, went to the mother's clubs of the various schools, arranged for discussions of hearing loss in school children, and attempted to interest volunteers in attending classes to learn the sweepcheck technique. The key personnel and the volunteers then arranged the mechanics of the actual testing procedure and performed the sweepcheck screening tests. It was also their responsibility to notify parents whose children failed the test and arrange for them to return for a recheck.

For the most part, volunteer cooperation was good. However, mother's clubs in certain schools did not do as well as could be expected, so that only 3500 children instead of the anticipated 5600 children were tested. We feel that this was due to poor parental education; these women were not convinced of the necessity and importance of the program.

Poor parental education and understanding also explains the fact that only 150 of the 245 children who failed the screening test appeared for the recheck examination. We are of the opinion, that had the volunteer workers and the mothers of the children been properly prepared, the percentage of children seen for recheck examination would have been greater.

Finally, only 12 per cent of the parents with hard of hearing children were aware of the condition prior to testing. This indicates that parental education on the subject of hearing loss in children is sorely needed. It also emphasizes the need for a routine school hearing testing program; if these children had not been discovered, it is likely that the hearing loss would have remained undiscovered until it was irreversible.

Another problem encountered concerned those students who failed the screening test but who had normal hearing on recheck examination. These children should not be forgotten, but must be watched and rechecked at a later date, to be certain that we are not dealing with an early fluctuating loss.

We feel that all of these problems could be easily remedied if full-time paid personnel were available. They could not only carry out the testing, but could also handle the educational aspects of the program.

CONCLUSIONS

The results of this survey make the need for a routine hearing testing program in the schools of New Orleans and throughout the state of Louisiana evident. Ideally, every child in every school should be checked once yearly, but this is not possible because of the large number of children involved. Authorities agree that hearing loss should be discovered as early as possible, and therefore, at the inception of a hearing program all first grade children should be tested each year. We have shown that modern audiometric testing techniques can be used in this age group.

Success of such a program depends almost entirely on the amount of cooperation received from the parents of the children. Therefore, parental education is a most important element in the framework of such an undertaking. Parents should be made to realize the importance and desirability of such a survey, so that when the screening test reveals the possibility of hearing loss in a particular child, the parent will cooperate in the follow-up work.

We furthermore feel that such a program should be in the hands of a fixed staff of paid personnel under the direction of an otologist in order to obtain maximum benefits.

ACKNOWLEDGEMENTS

We would like to express our appreciation to the Archdiocesan School Board, Msg. Henry C. Bezou and the Physicians' Health Committee of the Parochial Schools for their support and cooperation; to Mrs. Thomas F. Kelly who worked tirelessly in arranging for the volunteers and in carrying out the tests. We would also like to acknowledge the assistance of Miss Betty Naquin and Mr. George Haspiel.

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SIMPLIFIED INSURANCE CLAIM FORMS

Insurance claim forms have become an increasing problem to the practitioner of medicine from the point of view of volume and from the point of view of complexity.

In the meeting of the House of Delegates of the Louisiana State Medical Society, in 1954, interest was manifest in securing simplified and uniform insurance claim forms, if necessary, through legal legislative channels. Shortly thereafter, it became manifest that the insurance companies and the American Medical Association were collaborating in an effort to bring about such a result. Several years ago, certain simplified insurance claim forms were developed by the Health and Accident Underwriters Conference and the International Claim Association. They were approved by the National Association of Insurance Commissioners and by the Council on Medical Service. These forms, at the time, did not come into general acceptance, for which there were advanced several reasons. When it became apparent that further efforts were necessary, resolutions were introduced in and adopted by the House of Delegates of the AMA, calling for renewed activity in this field, such as conferences between the Health Insurance Council and the AMA. The Health Insurance Council created a special committee on uniform claim forms, which committee was representative of all types of insurance companies writing surgical expense benefit coverage. This committee circularized some 600 insurance companies to get expressions of minimal needs for administering group surgical expense insurance benefits.

The special committee of the Health Insurance Council and the Committee on Prepayment and Hospital Service of the Council on Medical Service of the AMA have collaborated to produce a form designated as "GS-1" to cover the surgeon's statement for the patient with prepayment surgical insurance. This form is simpler than those in current use and has only five groups of questions. It is such as the surgeon could fill out easily, or trained assistants could complete with minimal help. Its acceptance and use by our constituent associations is most desirable.

The Committee on Prepayment Medical and Hospital Service of the Council on Medical Service contemplates some six additional simplified forms to cover the diversity of types of benefits offered by the various prepayment plans. As progress is realized, it is planned that it will be reported promptly to the profession.

The need for simplification of these forms has been recognized by the insurance companies themselves, as was shown

by the outgoing president of the International Claim Association, who felt that simplification was the most important item on the agenda. He summarized the complaints against the forms in use, in 1953, as follows:

1. Too many different forms
2. Forms too long and too complex
3. Same questions worded in different ways requiring study to determine just what information was wanted
4. Nonmedical and investigative inquiries made in medical forms
5. Forms used were often an imposition on the physician's time and not infrequently a reflection on his integrity.

From information gathered by the special committee it appeared that the complaints were well justified. It was found that insurance companies were using "26 different ways to inquire about diagnosis, 34 different ways to inquire about present condition (of patient), and 42 different ways to inquire about prognosis."

Simplification of these forms will work in the direction of better service for the patient. At present, there is a triangular conflict developing between the insurance company, the patient, and the physician. The physician finds the form exacting and time consuming. The patient feels that completion of the form is merely a written record of a service already performed, and presumably, paid for. The companies have taken the position that they are not obligated to pay for proof of a claim against themselves. When the information desired is primarily for the benefit of the company, it is clear that the responsibility for payment falls upon the company. When the information or certification desired is of primary interest to the patient, it is thought that the physician should re-examine any inclination to charge the patient. Such action on the part of the physician promotes better feeling and improves medicine's public relations. This is considered advisable in spite of the obvious facts in the situation that there is no such thing as something for nothing and that every service is rendered at a cost. Ultimately, the patient has to pay as a part of the total cost of medical care, just as he pays a proportionate part of his insurance coverage.

The action on the part of the AMA and the Committee on Prepayment Medical and Hospital Service of the Council on Medical Service is to be commended, and it is hoped that the simplified forms, when available, will receive general acceptance and physician cooperation.

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ORGANIZATION SECTION

The Executive Committee dedicates this section to the members of the Louisiana State Medical Society, feeling that a proper discussion of salient issues will contribute to the understanding and fortification of our Society.

An informed profession should be a wise one.

WALTER MOSS, M. D.
President
1954 - 1955

Dr. Walter Moss who has just completed his term as President of our Society has been very energetic in fostering many activities for the good of the Society and its members. This has been a very hectic year and many problems have arisen for consideration and solution. Dr. Moss has faced these problems with the idea always uppermost in his mind, as to what would be best for the good of our Society and its members.

Dr. Moss has at all times shown great interest in our component societies and has attended many of their meetings. He has always striven to create more interest and enthusiasm in the membership of these societies. He has attended many of the hospital staff meetings where he was always given an enthusiastic welcome.

Dr. Moss received his early education in the public schools of Lake Charles, Louisiana, his home city. He attended Tulane Medical School and received his M.D. degree in 1927. After graduation he served his internship in the Charity Hospital at New Orleans and following his internship he served with distinction as House Surgeon for four years, gaining much valuable surgical experience, thereby preparing himself for an active surgical practice which he has since enjoyed in the City of Lake Charles.

Dr. Moss was licensed to practice medicine in 1927 and on completion of his training at Charity Hospital at New Orleans he became a member of the State Society in 1933. He is also a member of the Southern Medical and American Medical Associations, is a Fellow of the American College, and International College of Surgeons. He is a Diplomate of the American Board of Surgery.

Dr. Moss has served in past years on Committees of the State Society and has also served as First Vice-President. He is very active in his local Medical Society and served as President of the Calcasieu Parish Medical Society during 1936-1937. He was Chairman of the State Board of Institutions in 1941-1942. Dr. Moss has been actively interested in the Tulane Alumni Association and served as its President in 1946-1947.

Dr. Moss takes quite an interest in civic affairs in his section of the State and is serving as a member of the Board of Directors of the Association of Commerce in Lake Charles at the present time.

Dr. Moss was quite active in the State Society's fight against the licensing and creation of an examining board for the chiropractors at the last session of the

State Legislature and is still very active in the promotion of plans for opposing such legislation in the 1956 Session.

Dr. Moss has recommended in his Annual Report that the House of Delegates increase the dues to $50.00 per year, thereby, giving the Society some much needed additional funds to assist us in our fight against any law which would legalize these cultists to practice medicine in Louisiana. This fight must go on unless the profession is ready to fraternize with these chiropractors and we do not believe this is your feeling at this time. Why not help Dr. Moss and many others in this desire to keep the practice of medicine on a high plane in Louisiana?

We wish to assure you, Dr. Moss, that the members of the Society appreciate your services, so willingly given, to its members and to organized medicine during the past year. We sincerely hope you will never lose interest in us but will continue to work for the good of the profession during your future medical career.

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TO THE MEMBERS OF THE LOUISIANA STATE MEDICAL SOCIETY

Your House of Delegates will meet at the Roosevelt Hotel at 9:00 in the morning of May 2, 1955. As you know, this is the policy-forming group of the State Society and it gives me great pleasure to invite you to attend all sessions of the House of Delegates. There will be many things of interest to you as a physician brought before this Body and there will be several distinguished guest speakers who will address the House.

ANNUAL MEETING
May 2 - 4

Don't forget to mark your calendar for above dates. A splendid scientific program has been prepared for you.

Frequently we do not show the essayists proper consideration and courtesy when we do not attend these scientific sessions. They go to a lot of trouble and spend many hours of their valuable time to prepare these papers for this meeting. We could, at least, devote a small part of our time in attendance at these meetings. After all, our members profit by gaining knowledge from hearing these papers and discussions. He, who best prepares himself renders better medical service to his patients.

The public opening meeting will be held on Monday evening, May 2, at 8:00 p. m., when Dr. F. J. L. Blasingame, Trustee of the American Medical Association and President of the Texas Medical Association will be the Annual Orator.

A luncheon meeting for all members of the Society will be held on Tuesday, May 3 at Noon. An interesting program is being planned in which some of the out-of-state guest speakers, as well as local speakers, will participate.

A most interesting and instructive meeting will be held Tuesday evening at 8:00 p. m. when Mr. Leo Brown, Director of the A.M.A. Public Relations Council will be featured as the guest speaker. This meeting will be for the members and their wives and members of the Woman's Auxiliary.

The Annual Dinner Dance will be on Wednesday evening, May 4, in conformity with the wishes of the Executive Committee. It will be held in the large new International Room at the Roosevelt Hotel where plenty of room for dancing will be available without disturbing anyone seated at their respective tables.

Come one—come all and have a good time.

TENTH ANNUAL NATIONAL CONFERENCE ON RURAL HEALTH
held by
THE AMERICAN MEDICAL ASSOCIATION
MILWAUKEE, WISCONSIN

The Tenth Rural Health Conference of the American Medical Association was held in the Schroeder Hotel, Milwaukee, Wisconsin, on January 24th to the 26th, 1955. The theme this year was "Looking Both Ways", and Louisiana was represented by three members of the Rural and Urban Health Committee of the State Society. Dr. M. C. Wiginton and Dr. Guy R. Jones were accompanied by their wives.

The Louisiana Health Council was represented by Mr. Robinson of Hammond, Mrs. T. R. Tomlinson of Shreveport, as well as three doctors of the Rural and Urban Health Committee. The attendance this year was a little less than usual, but still was around 500 people. They represented all sections of the country, all strata of society and most of the businesses and professions.

Dr. F. S. Crockett, Chairman, of Lafayette, Indiana was the guiding spirit as usual with these conferences. But other outstanding personalities from the medical profession as well as from fields of education, nursing, dentistry and agriculture were well in evidence. Panels were set up for each half day of the conference, and the first was held on Thursday afternoon. This panel was composed of a physician, an extension worker, a farmer, and a 4H boy and girl. On Friday morning, another panel on the "Family Responsibility for Health" was ably discussed by a physician, a homemaker, a farmer, and a 4H boy and girl. This was followed in the afternoon by a Public Health Program, and on Saturday morning "Gems of Wisdom" was expounded by several dif-

ferent speakers about almost every portion of rural life. The evening session on Thursday was given over to the recreational department of Milwaukee. The Friday night session was limelighted by the Medichoir put on by the medical students of the University of Wisconsin. The same night, Mrs. Charles W. Sewell spoke on the theme "How Far That Little Candle Throws Its Beam".

Again, the American Medical Association through its Rural Health Council has demonstrated what this conference can do. Everyone left feeling much enriched from this great experience. Next year, the meeting will be held in Portland, Oregon.

J. P. Sanders, M. D.,
Chairman, Rural and Urban
Health Committee,
Louisiana State Medical Society

A.M.A. PRESIDENT SUGGESTS CHANGE IN DEPENDENT MEDICAL CARE

The president of the American Medical Association today said that government help in providing medical care for servicemen's dependents should take into consideration the conservation of our "total medical resources."

Dr. Walter B. Martin, Norfolk, Va., said in the current (March 26) Journal of the A.M.A. that it is obvious the short-term serviceman may have difficulty in providing medical care for his family. Career personnel naturally look to the government for assistance, but the present system for short-term servicemen's dependents is "haphazard and unfair."

In attempting to improve the situation, the government should try to utilize both military and civilian medical sources, he said.

"To rob the one and overexpand the other is a harmful policy," Dr. Martin said. "If major hostilities should develop, a greatly expanded medical service for the armed forces will be required. They can effectively augment their strength only from a virile and effective civilian medical population.

"The present system of providing care for dependents is haphazard and unfair, since the availability of such care is now on the basis of chance proximity to a service institution. In other areas, remote from such hospitals, the bulk of the work must be done by civilian medical personnel and in civilian hospitals. Where both types of facilities exist, freedom of choice by the dependent as to where medical care is sought would depend on local conditions and other factors.

"The government hospitals in the continental United States are at present in competition with civilian hospitals in many areas. The federal government, in conjunction with states and localities, is spending millions of dollars under the Hospital Survey and Construction Act in civilian hospital construction, and yet, at the same time, this government is making it more difficult for some of these civilian hospitals to operate at a more reasonable cost.

"Much of the patient load that would normally flow into these hospitals is diverted from community enterprises into government-supported hospitals. This does not make sense from the standpoint of producing good medical care for the American people as a whole.

"It has resulted in the wasteful duplication of hospital facilities, unwarranted dispersion of needed personnel, and an increased cost of hospital care for those who pay their way.

"A voluntary system of insurance, jointly financed by the individual and the government, has been proposed. This plan should contain a clear definition of dependency and should allow freedom of choice by the dependents as to whether they seek care in an armed forces or a civilian facility.

"This plan would result in a more even distribution of civilian patients as between service and civilian hospitals, stabilize the intake, decrease the cost for the armed forces, and support the economy of the civilian hospital system. It would lessen the dislocation of both patients and professional and technical personnel and would conserve our total medical resources."

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MEDICAL NEWS SECTION

CALENDAR

PARISH AND DISTRICT MEDICAL SOCIETY MEETINGS

Society	Date	Place
Calcasieu	Fourth Tuesday every other month	Lake Charles
East Baton Rouge	Second Tuesday of every month	Baton Rouge
Morehouse	Third Thursday of every month	Bastrop
Natchitoches	Second Tuesday of every month	
Orleans	Second Monday of every month	New Orleans
Ouachita	First Thursday of every month	Monroe
Rapides	First Monday of every month	Alexandria
Sabine	First Wednesday of every month	
Tangipahoa	Second and fourth Thursdays of every month	Independence
Second District	Third Thursday of every month	
Shreveport	First Tuesday of every month	Shreveport
Vernon	First Thursday of every month	

INTERIM MEETING LOUISIANA ACADEMY OF GENERAL PRACTICE

The Louisiana Academy of General Practice with the co-operation of Lederle Laboratories will present a Symposium on "Recent Advances in Medicine" on Sunday, April 17, 1955, at the Roosevelt Hotel in New Orleans. Invitations are being extended to all physicians in Louisiana, Mississippi, and South Texas.

The morning session will be devoted to discussions on "Proctology" by Dr. Howard T. Trimpi, Assistant Professor of Proctology at Temple University, and "Cardiac Auscultations" by Dr. William Likoff, Associate Professor of Medicine at Hahnemann Medical College.

The afternoon session will include a discussion on "The Future of Atomic Medicine" by Dr. Joseph W. Howland, Professor of Radiation Medicine at University of Rochester School of Medicine.

Following this discussion Dr. Edward Allen, Clinical Professor of Obstetrics and Gynecology at Rush Medical College will report on "The Diagnosis and Treatment of Gynecologic Disease in the Adolescent Girl."

Panel discussions and question periods will follow both morning and afternoon sessions. A midday luncheon will be provided in the International Room of the Roosevelt Hotel, and a cocktail party will follow the afternoon session. The doctor's wives are invited to both of these social events and a day full of activity is planned for the ladies. There is no registration for either the scientific or social events. All physicians and their wives are invited as guests of the Louisiana Academy of General Practice and Lederle Laboratories.

Advance reservations are requested and these should be addressed to: Rafael C. Sanchez, M. D., Louisiana Academy of General Practice, 217 Humble Bldg., 909 S. Jefferson Davis Parkway, New Orleans 25, Louisiana.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

The next scheduled Examination (Part II) oral and clinical for all candidates will be conducted at the Edgewater Beach Hotel, Chicago, Illinois, by the entire Board from May 11 through May 20, 1955. Formal notice of the exact time of each candidate's examination will be sent him in advance of the examination dates.

Candidates who participated in the Part I examinations will be notified of their eligibility for the Part II examinations as soon as possible.

REVIEWS OF A.M.A. MEDICAL MOTION PICTURES

The Committee on Medical Motion Pictures of the A.M.A. announces that Booklet #6 of Reviews of Medical Motion Pictures is now ready for distribution. This booklet contains 64 critical reviews of medical and health films which were published in THE JOURNAL during 1954. A copy has been sent to the secretary of each state medical society and they are available to county medical societies from the Committee on Medical Motion Pictures. Other requests should be sent to the Order Department, American Medical Association, 535 North Dearborn Street, Chicago 10. The price of individual booklets is 25 cents each or the complete set of six booklets including all reviews published since 1946 is available for $1.00.

COURSE IN THE CLINICAL PATHOLOGY AND PATHOLOGY OF PARASITIC DISEASES

A short intensive course on the laboratory diagnosis and pathology of parasitic infections will be presented August 15-27, 1955, at the Louisiana State University School of Medicine in New Orleans.

The course is designed primarily for pathologists and technologists. However, general prac-

titioners, internists, pediatricians, gastroenterologists and physicians engaged in the practice of public health and tropical medicine who are interested in the laboratory diagnosis of parasitic infections are welcome to attend. The instruction and training will be of assistance to pathologists who are preparing for board examinations, to pathologists and physicians who are responsible for the diagnosis of parasitic infections in their laboratories and to technologists engaged in this specialty.

The course will include lectures, extensive demonstrations, films and supervised individual laboratory study. Emphasis will be placed upon the practical aspects of laboratory diagnosis of common parasitic infections, including training in stool examination and stool concentration technics. Abundant material from patients with parasitic diseases endemic in this area will be available for examination. Comprehensive slide sets containing parasitic organisms in tissue sections will be studied. Library facilities are available. The medical school building is air conditioned.

Registrants should bring their microscopes, equipped with mechanical stages, and their microscope lamps. A limited number of places will be available. The fee for the course is $50.00.

Persons interested in attending this course may write to:

Dr. Clyde Swartzwelder
Department of Microbiology
Louisiana State University School of Medicine
1542 Tulane Avenue
New Orleans 12, Louisiana

AIR POLUTION PROBLEM

Plans have been completed by the Air Pollution Foundation in Los Angeles for stiff road tests to be given the Houdry catalytic converter, one of the most promising devices aimed at controlling emission of hydrocarbons from auto exhausts in the battle against smog.

The Air Pollution Foundation announced that it has contracted with the Southwest Research Institute at San Antonio, Texas, to check the operation of two types of mufflers designed by Eugene J. Houdry, one for use with nonleaded white gasoline and the other for use with gasoline containing tetraethyl lead.

W. L. Faith, chief engineer and deputy director of the Air Pollution Foundation, who made arrangements with Houdry in Wayne, Pennsylvania to test his device, says it is one of the "more promising catalytic devices for the auto exhaust."

LAKESIDE INTRODUCES PIPTAL FOR PEPTIC ULCER THERAPY

Piptal, a new oral cholinolytic for rapid and sustained relief of peptic ulcer and pain spasm, has been introduced nationally by Lakeside Laboratories, Inc.

The product is the second in the company's pioneering series of piperidols, developed in its extensive research program under the direction of Dr. Harvey L. Daiell. The first was Dactil, introduced in 1954.

Dr. Daiell said that clinical experience with Piptal has affirmed outstanding freedom from side effects such as urinary retention and constipation. These side effects have heretofore been unavoidable in peptic ulcer therapy with anticholinergics, he pointed out.

Piptal's action is sharply focused on the gastroduodenal area, Dr. Daiell reported. Consequently, its effect on the bowel and bladder is negligible.

SNAKE-ROOT DRUG BRINGS GAINS IN FIGHT AGAINST SCHIZOPHRENIA

A drug derived from an Indian root is proving a valuable weapon against this country's foremost mental disease problem, doctors from California and Illinois reported here today.

The drug, reserpine, has made it possible to reduce the need for drastic brain surgery, known as leucotomy, in cases where no other alternative had seemed possible, it was revealed.

These and other findings were presented at a meeting sponsored by The New York Academy of Sciences and held under the co-chairmanship of research scientists of Ciba Pharmaceutical Products, Inc., Summit, N. J. Ciba's reserpine drug, Serpasil, was used in these experiments.

STUDENTS ENTERING NURSING

More students entered schools of professional and practical nursing in 1954 than in any year since World War II, according to John H. Hayes, chairman, Committee on Careers, National League for Nursing.

Schools of professional nursing in the United States and territories admitted 44,930 new students, a 3.7% increase over the 43,327 students admitted in 1953. The 1,141 professional nursing schools reporting admissions to the National League for Nursing represent all state-approved schools offering three-year diploma or four to five-year degree programs in basic nursing education.

LEVOPHED AND NEO-SYNEPHRINE SUCCESSFUL IN SURGICAL SHOCK

A two-year study has demonstrated the vasopressor drugs Levophed and Neo-Synephrine to be "markedly successful" in the treatment of surgical shock at the Hertzler Clinic here, according to Dr. J. W. Welch.

Reporting in the *American Journal of Surgery* (88:922, 1954), he states that 50 patients who were victims of surgical or neurogenic shock were treated with Levophed or Neo-Synephrine, or both. All 30 patients given intravenous in-

fusions of Levophed "showed a positive and substantial pressor effect." In 28 of the 30 cases, Dr. Welch notes, transfusions, oxygen, intramuscular vasopressors and other supportive measures were administered prior to Levophed. The latter was given immediately in the remaining two cases because "shock was so precipitate and profound."

BOOK REVIEWS

Psychomotor Aspects of Mental Disease; by H. E. King, Ph.D., Cambridge, Mass., Harvard University Press, 1954, Pp. 185, Price $3.50.

This is a series of systematic observations upon the psychomotor functioning of persons with mental disturbances. The purpose of this study is to examine in more detail the relationship between psychomotor functions and behavior disorders. The underlying theory is that movement is fundamental to living organisms and that body movements, while facilitated by biological mechanisms, also serve psychological purposes in that they bring the organism into exchange with his external environment and facilitate his struggle for adaptation. Fundamentally, this is a new and refreshing approach to the age old mind-body problem.

Six groups of matched subjects ranging from normal to severely disturbed psychotics were given a series of representative psychomotor tests. The findings indicate there is a demonstrable and consistent relationship between severity of disturbance and performance on these tasks. Two hypotheses are proposed to account for these findings: (1) "That the observed faulty psychomotor performance of subjects with a behavior disorder is a secondary, symptomatic reflection of a general blunting of performance, and participation by the patient . . . ;" and (2) "That the observed faulty psychomotor performance of subjects with a behavior disorder is a primary indication of disturbance in a basic adaptational process. . . . " The data from this experiment does not fully support the first hypothesis and further experiments are needed to verify the second hypothesis.

This work offers a method of evaluating mental disturbance in a quantifiable manner and also provides a theoretical framework from which more research can develop. Additionally, it includes the only comprehensive review of the literature available in this area. The book is well organized, succinctly and clearly written. The author's approach is constructively critical and intellectually honest. This is an important and progressive work for this area of investigation and should be of interest and value to psychiatrists, psychologists, neurologists, and neurophysiologists.

NANCY SIMMS

Practical Fluid Therapy in Pediatrics; by Fontaine S. Hill, M.D., Philadelphia, Pa., W. B. Saunders Company, 1954, Pp. 275, Price $6.00.

There was a time when the pediatrician realized the necessity of supplying fluid to dehydrated infants and children but the means by which he could do this was extremely limited. In the past two decades, however, the progress which has been made has almost reached a stage where it is not only easy to supply fluid but mineralization can be controlled in an exact way. Notable contributions in research and the clinical aspects of this subject have been made by Hartmann, Darrow, Gamble, and Butler.

This book supplies a definite need for a practical guide which will be found useful in supplying fluid therapy to all using it. It covers all of the basic physiologic principles and tells in an easily read style just how they may be fulfilled. Dr. Hill has made a most comprehensive study by consulting all of the worthwhile contributions by recognized authorities in the past decade.

The table of contents makes it easy to find the information wanted. This is followed by a glossary which no one will deny has been needed to define just what is meant in this increasingly used therapy. Seldom have we read a book which achieves its purpose so easily. This book should be on the desk of practitioners and specialists alike. It likewise seems to this reviewer indispensable to interns and residents in pediatrics.

ROBERT A. STRONG, M. D.

PUBLICATIONS RECEIVED

Grune & Stratton, N. Y.: Potassium Metabolism in Health and Disease, by Howard L. Holley, M. D., and Warner W. Carlson, Ph.D.

Little, Brown and Company, Boston: Ion Exchange and Adsorption Agents in Medicine; The Concept of Intestinal Bionomics, by Gustav J. Martin, Sc.D.

The C. V. Mosby Co., St. Louis: Surgery of Face, Mouth, and Jaws, by Frank McDowell, M. D., James Barrett Brown, M. D., and Minot P. Fryer, M. D.

W. B. Saunders, Co., Phila.: Nationwide Symposium on Rheumatic Diseases with 19 Clinics, (2nd Edit.); Fluoroscopy in Diagnostic Roentgenology, by Otto Deutschberger, M. D.

Charles C Thomas, Publisher, Springfield, Ill.: Hematology, by Cyrus C. Sturgis, M. D., (2nd Edit.); Doctors in the Sky, by Robert J. Benford, M. D., Colonel, Medical Corps, United States Air Force.

Year Book Publishers, Inc., Chicago: Surgery of the Small and Large Intestine, by Charles W. Mayo, M. D.